



**WOLVERINE GAS AND OIL COMPANY**  
of Utah, LLC

*Energy Exploration in Partnership with the Environment*

September 19, 2005

Fluid Minerals Group  
Bureau of Land Management  
Richfield Field Office  
150 East 900 North  
Richfield, Utah 84701

RE: Application for Permit to Drill – Wolverine Gas & Oil Company of Utah, LLC  
**Wolverine Federal Arapien Valley #24-1**

*Surface Location:* 2,358' FNL, 696' FWL, SW/4 NW/4

*Target Location:* 792' FNL, 1,868' FWL, NE/4 NW/4

Section 24, T20S, R1E, SLB&M, Sanpete County, Utah

Dear Fluid Minerals Group:

Wolverine Gas & Oil Company of Utah, LLC (Wolverine) respectfully submits the enclosed original and two copies of the *Application for Permit to Drill (APD)* for the above referenced directional well. Included with the APD is the following supplemental information:

Exhibit "A" – Survey plat and layout of the proposed well site;

Exhibit "B" – Road design and cross-sections;

Exhibit "C" – Proposed location maps with access corridor;

Exhibit "D" – Test Facility for oil well layout;

Exhibit "E" – Drilling prognosis with BOP diagram and directional survey calculations;

Exhibit "F" – Surface use plan

Please accept this letter as Wolverine's written request for confidential treatment of all information contained in and pertaining to this application

Thank you very much for your timely consideration of this application. Please feel free to contact myself or Don Hamilton of Buys & Associates, Inc. at 435-719-2018 if you have any questions or need additional information.

Sincerely,

Edward A. Higuera, Manager – Development

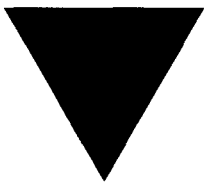
cc: ~~Diana Whitney~~, Division of Oil, Gas and Mining  
Lee Holmstead, Sanpete County Planning & Zoning  
Don Hamilton, Buys & Associates, Inc.  
Dawn Martin, Buys & Associates, Inc.

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OCT 27 2005

DIV. OF OIL, GAS & MINING

**CONFIDENTIAL**



**WOLVERINE OPERATING COMPANY**  
**of Utah, LLC**

*Energy Exploration in Partnership with the Environment*

October 26, 2005

Diana Whitney  
Utah Division of Oil, Gas & Mining  
1594 W. N. Temple, Suite 1210  
Salt Lake City, UT 84114-5801

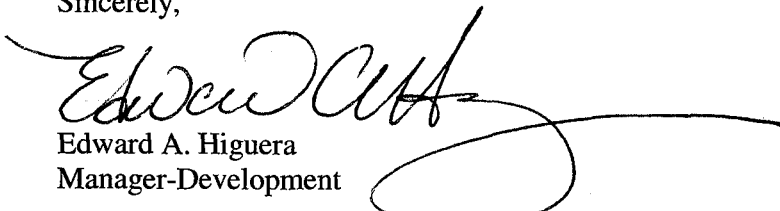
Re: Wolverine Federal Arapien Valley #24-1, Sanpete County, UT

Dear Ms. Whitney:

Wolverine Gas and Oil Company of Utah, LLC has submitted the attached APD for the Wolverine Federal Arapien Valley 24-1 to the BLM for approval. The well is planned to be a directional well, and we intend to hit the top of the Navajo, the target formation within the "400-foot square" and to TD the well no closer than 460 feet from the section line (see attached diagram). The well is being directionally drilled because of the topography of the area and to meet the distance requirement for an obligation well within the Federal Unit. The well bore will penetrate BLM leases, which are Wolverine-controlled leases, as you will see on the attached diagram and the figure in the attached APD.

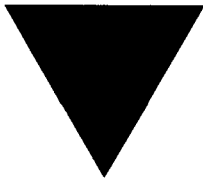
If you have any questions, please call.

Sincerely,

  
Edward A. Higuera  
Manager-Development

Encl.

RECEIVED  
OCT 27 2005  
DIV. OF OIL, GAS & MINING



**WOLVERINE GAS AND OIL COMPANY**  
**of Utah, LLC**

*Energy Exploration in Partnership with the Environment*

October 28, 2005

Diana Whitney  
Utah Division of Oil, Gas & Mining  
1594 W. N. Temple, Suite 1210  
Salt Lake City, UT 84114-5801

RE: Application for Permit to Drill – Wolverine Gas & Oil Company of Utah, LLC  
**Wolverine Federal Arapien Valley #24-1**

*Surface Location:* 2358' FNL, 696' FWL, SW/4 NW/4

*Target Location:* 792' FNL, 1,68' FWL, NE/4 NW/4

Section 24, T20S, R1E, SLB&M, Sanpete Co., Utah

Dear Ms. Whitney:

Attached please find a replacement APD cover form for the above referenced well, which replaces the cover page submitted earlier. The first form was not as legible as it should have been. Please substitute this new form for the one sent previously.

We apologize for any inconvenience this may have caused you.

Sincerely,



Edward A. Higuera  
Manager – Development

Enclosure

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**NOV 03 2005**

**DIV. OF OIL, GAS & MINING**

COPY

UNITED STATES  
DEPARTMENT OF THE INTERIOR  
BUREAU OF LAND MANAGEMENT

APPLICATION FOR PERMIT TO DRILL OR REENTER

FORM APPROVED  
OMB No. 1004-0137  
Expires March 31, 2007

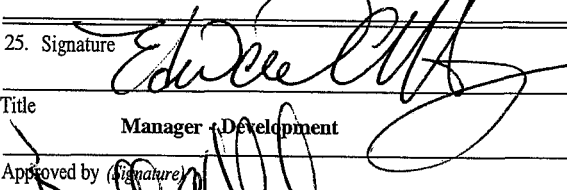
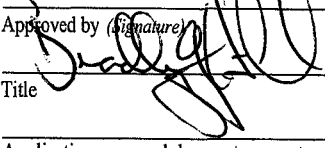
5. Lease Serial No. <b>UTU-80907</b>
6. If Indian, Allottee or Tribe Name <b>N/A</b>
7. If Unit or CA Agreement, Name and No. <b>Wolverine Federal Unit</b>
8. Lease Name and Well No. <b>Wolverine Fed. Arapien Valley 24-1</b>
9. API Well No. <b>43-039-30030</b>
10. Field and Pool, or Exploratory <b>Wildcat</b>
11. Sec., T. R. M. or Blk. and Survey or Area <b>Section 24, T20S, R1E, SLB&amp;M</b>
12. County or Parish <b>Sanpete</b>
13. State <b>UT</b>

1a. Type of work: <input checked="" type="checkbox"/> DRILL <input type="checkbox"/> REENTER		
1b. Type of Well: <input checked="" type="checkbox"/> Oil Well <input type="checkbox"/> Gas Well <input type="checkbox"/> Other <input type="checkbox"/> Single Zone <input type="checkbox"/> Multiple Zone		
2. Name of Operator <b>Wolverine Gas &amp; Oil Company of Utah, LLC</b>		
3a. Address <b>55 Campau NW Grand Rapids, MI 49503-2616</b>	3b. Phone No. (include area code) <b>616-458-1150</b>	
4. Location of Well (Report location clearly and in accordance with any State requirements.)* At surface <b>2358' FNL 696' FWL, SW/4 NW/4</b> At proposed prod. zone <b>792' FNL, 1,868' FWL, NE/4 NW/4</b>		
14. Distance in miles and direction from nearest town or post office* <b>4.79 miles southwest of Mayfield, Utah</b>		
15. Distance from proposed* location to nearest property or lease line, ft. (Also to nearest drig. unit line, if any)	16. No. of acres in lease <b>560</b>	17. Spacing Unit dedicated to this well <b>40 acres</b>
18. Distance from proposed location* to nearest well, drilling, completed, applied for, on this lease, ft. <b>None</b>	19. Proposed Depth <b>11,500' (11,260' TVD)</b>	20. BLM/BIA Bond No. on file <b>BLM WY3329</b>
21. Elevations (Show whether DF, KDB, RT, GL, etc.) <b>5,560' GR</b>	22. Approximate date work will start* <b>11/01/2005</b>	23. Estimated duration <b>120 days</b>

24. Attachments

The following, completed in accordance with the requirements of Onshore Oil and Gas Order No.1, must be attached to this form:

- |  |   |
|--|---|
| 1. Well plat certified by a registered surveyor.   | 4. Bond to cover the operations unless covered by an existing bond on file (see Item 20 above). |
| 2. A Drilling Plan.  | 5. Operator certification   |
| 3. A Surface Use Plan (if the location is on National Forest System Lands, the SUPO must be filed with the appropriate Forest Service Office). | 6. Such other site specific information and/or plans as may be required by the BLM.             |

25. Signature 	Name (Printed/Typed) <b>Edward A. Higuera</b>	Date <b>09/16/2005</b>
Title <b>Manager - Development</b>		
Approved by (Signature) 	Name (Printed/Typed) <b>BRADLEY G. HILL</b>	Date <b>11-03-05</b>
Title <b>ENVIRONMENTAL SCIENTIST III</b>		

Application approval does not warrant or certify that the applicant holds legal or equitable title to those rights in the subject lease which would entitle the applicant to conduct operations thereon.  
Conditions of approval, if any, are attached.

Title 18 U.S.C. Section 1001 and Title 43 U.S.C. Section 1212, make it a crime for any person knowingly and willfully to make to any department or agency of the United States any false, fictitious or fraudulent statements or representations as to any matter within its jurisdiction.

\*(Instructions on page 2)

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NOV 03 2005

DIV. OF OIL, GAS & MINING

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Federal Approval of this  
Action Is Necessary

Surf 434500X  
4323030Y

39.005768  
-111.756996

BHL 434863X  
4323503Y  
39.060056  
-111.752846



# Section 24, T.20 S., R.1 E., S.L.B. & M.

## PROJECT Wolverine Gas & Oil Company of Utah, L.L.C.

WELL LOCATION, LOCATED AS SHOWN IN THE S.W. 1/4 OF THE  
N.W. 1/4 OF SECTION 24, T.20 S., R.1 E., S.L.B. & M.  
SANPETE COUNTY, UTAH

### LEGEND

- ✕ = SECTION CORNERS LOCATED
- ⊙ = QUARTER SECTION CORNERS LOCATED
- = PROPOSED WELL HEAD

NOTE: THE PURPOSE OF THIS SURVEY WAS TO PLAT  
THE WOLVERINE FEDERAL ARAPIEN VALLEY #24-1  
LOCATION, LOCATED IN THE S.W. 1/4 OF  
THE N.W. 1/4 OF SECTION 24, T.20 S., R.1 E.,  
S.L.B. & M., SANPETE COUNTY, UTAH.

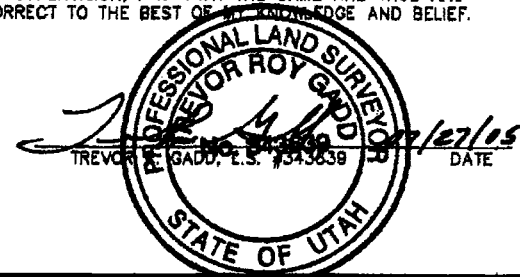
### BASIS OF ELEVATION

ELEVATION BASED ON THE 1988 REDMOND, UTAH  
U.S.G.S QUADRANGLE MAP



### CERTIFICATE

THIS IS TO CERTIFY THAT THIS PLAT WAS PREPARED FROM  
FIELD NOTES OF ACTUAL SURVEYS MADE BY ME OR UNDER  
MY SUPERVISION, AND THAT THE SAME ARE TRUE AND  
CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF.

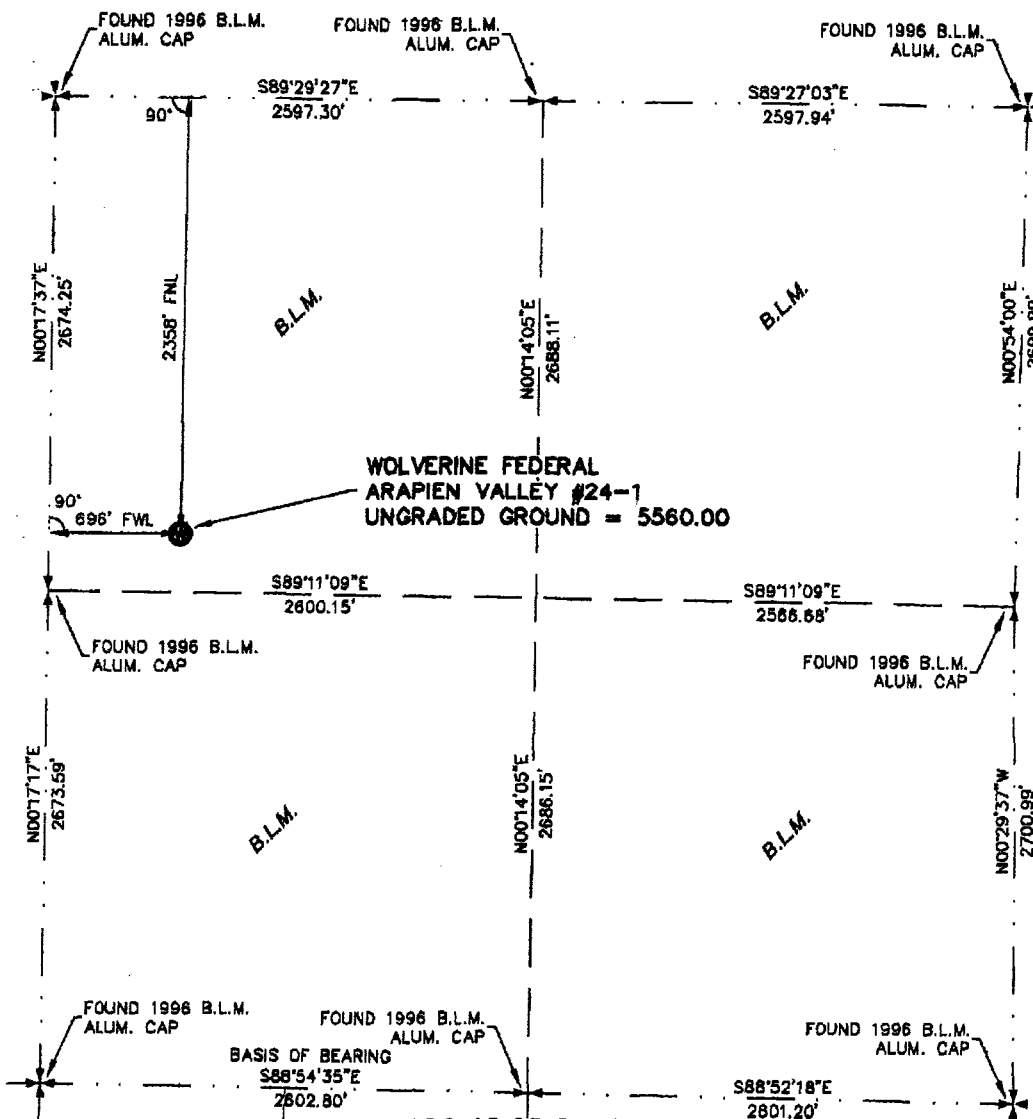


**Jones & DeMille Engineering**  
1535 South 100 West - Richfield, Utah 84701  
Phone (435) 898-8288  
Fax (435) 898-8288  
www.jonesanddemille.com

Well Location Plat for

Wolverine Gas & Oil Company of Utah, L.L.C.

DESIGNED	SURVEYED	CHECKED	DRAWN	PROJECT NO.	SHEET NO.
—	T.W.G.	T.R.G.	TG/BL	0508-124	1
DATE 07/27/05		DWG. NAME WELLPLAT	SCALE 1"=1000'		



### BASIS OF BEARINGS

BASIS OF BEARING USED WAS S88°54'35"E BETWEEN THE SOUTHWEST CORNER  
AND THE SOUTH QUARTER CORNER OF SECTION 24, T.20 S., R.1 E., S.L.B. & M.  
LATITUDE = 39°03'21.1221" (39.05586725) NAD 83  
LONGITUDE = -111°45'27.4195" (-111.75761653) NAD 83

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One inch = 500 ft.

FOUND 1996 B.L.M.  
ALUM. CAP  
NW cor. S24

FOUND 1996 B.L.M.  
ALUM. CAP

FOUND 1996 B.L.M.  
ALUM. CAP  
NE cor. S24

S89°00'32"E

2595.68'

S88°58'08"E

2596.32'

2069.01'

792.00'

460.00'

BHL

Target

1868.00'

NW/4  
B.L.M.

NE/4  
B.L.M.

N00°43'00"E

2686.43'

S01°22'55"W

2608.30'

S88°42'14"E

2598.53'

AV 24-1 SHL

FOUND 1996 B.L.M.  
ALUM. CAP

Sec. 24



**WOLVERINE GAS & OIL CORPORATION**  
*Energy Exploration in Partnership with the Environment*

ONE RIVERFRONT PLAZA  
55 CAMPAU, N.W.  
GRAND RAPIDS, MI 49503-2616  
(616) 458-1150

Arapien Valley 24-1 Proposed SH & BH Location  
T20S-R1E  
Sanpete County, UT

Scale: 1" = 500'

Date: 25 October, 2005

Data Source:

# **WOLVERINE GAS AND OIL COMPANY OF UTAH, LLC**

## **DRILLING PROGNOSIS**

**Wolverine Federal Arapien Valley # 24-1  
SW NW SEC 24-T20S-R01E  
Sanpete Co., Utah**

### **BRIEF DRILLING PLAN**

Due to surface topography constraints, directionally drill a 11,500' MD (11,260' TVD) test of the Navajo formation on a day work contract basis from a drill pad located in the SW NW of Sec 24 T20S – R01E, Sanpete Co, UT. Please refer to the directional drilling plan attached for detailed hole angle, trajectory and target information. Deviation is the primary drilling concern in this area. No abnormal pressure is anticipated. The projected surface and bottomhole locations are as follows:

Surface Location: 2358' fnl & 696' fwl of Sec 24 T20S – R01E  
BHL @ top of NVJO1 (9310' TVD) 792' fnl & 1868' fwl of Sec 24 T20S – R01E

30" conductor casing will be cemented to surface at approximately 150 ft BGL. A 17-1/2" hole will be drilled vertically to 1000' and then deviated to 15 deg by 1700' MD (1700' TVD). A tangent section will be continued to 3500' MD (3430' TVD) at 15 deg at which time 13-3/8" surface csg will be set & cemented to surface. A 12-1/4" tangent section will be drilled below 13-3/8" csg to 8800' MD (8600' TVD). From 8800' MD to 9550' MD (9310' TVD) the hole angle will be dropped to vertical. Hole size may be reduced to 8-1/2" at about 8000' – 8500' depending upon hole conditions. The remainder of the well will then be drilled vertically to 11,500' (11260' TVD). The well will be logged and 7" casing will be set at TD for a completion attempt. Cement will be raised to approximately 8500' MD.

## **EMERGENCY NUMBERS – dial 911 or**

Sevier Valley Medical Center	(435)-896-8271
Medical Helicopter	(800)-453-0120
Sheriff Department	(435)-896-2600
Fire Department-Richfield, UT	(435)-896-5479
Emergency Medical Technician Service-Salina, UT	(435)-529-7300
Bureau of Land Management (Richfield):	(435)-896-1500
Bureau of Land Management (Salt Lake City)	(801) 539-4045
Utah Division of Oil, Gas and Mining (Salt Lake City):	(801)-538-5340

## **United States Bureau of Land Management**

Contact Al McKee (801) 539-4045 24 hrs prior to spudding

## **Utah Division of Oil, Gas and Mining**

Contact Carol Daniels (801) 538-5284, 24 hrs prior to spudding

## **GENERAL INFORMATION**

**OBJECTIVE:** Navajo @ 9550' MD or 9310' (TVD)      **ELEVATION:** 5550' GL (est)  
5580' KB

**PROJECTED TOTAL DEPTH:** 11,500' MD; 11,250' TVD

**SURFACE LOCATION:** 2358' FNL & 696' FWL; Sec 24-T20S-R01E

**COUNTY:** Sampete      **STATE:** Utah

**DIRECTIONS TO LOCATION:** (to be determined)

## **PROPOSED CASING PROGRAM:**

Hole Size	Casing Size	Wt./Ft.	Grade	Joint	Measured Depth
36"	30"	.375 wall		PE welded	150'
17-1/2"	13-3/8"	68#	J-55	BTC	0'-3500'
8-1/2"	7"	26#	HCP-110	LTC	0' -11,500'

Hole Size	Casing Size	Drift ID, in.	OD of Couplings	Annular Volume in OH, cf/ft	Annular Volume in Csg, cf/ft	Capacity of casing, cf/ft
36"	30"	Conductor		Pre-set		
17-1/2"	13-3/8"	12.259	14.375	.6946	1.0982	.8406
8-1/2"	7"	6.151	7.656	.1268		.2148

## **GEOLOGIC FORMATIONS:**

Formation	Interval (TVD)	Interval (MD)	Lithology	Prod	Abnormal or H2S
Arapien	Surf - 8600'	Surf - 8800'	sh, siltstone, salt, evaporites		
TwinCreek	8600' - 9310'	8800' - 9550'	Carbonates		
Navajo	9310' - 11050'	9550' - 11250'	Sandstone w/ minor shale	X	
Chinle	11,050'	11250			
Total Depth	11,250'	11,500'			

## **CONSTRUCTION OF SURFACE LOCATION**

400' x 400' Pad

185' x 240' x 10' Reserve Pit with a 12 mil synthetic liner

96" diameter tin horn cellar, 10' deep.

Flare pit a minimum of 100' from wellhead.

## **SURFACE HOLE: 0' to 3500'**

Directionally drill a 17-1/2" hole with a tricone bit, mud motor, MWD & BHA equipment to approximately 3500' using a salt saturated mud system (make hole to fit 13-3/8" casing). Loss circulation could be a problem in this interval and, if such occurs, begin pumping LCM pills and if necessary into the entire system as needed. Maintain hole angle and direction in keeping with the attached directional plan.

## **PRESSURE CONTROL & SAFETY EQUIPMENT FOR SURFACE HOLE**

### **Bottom to Top (see attached 2M Diverter diagram)**

20" 2M x 20" SOW flange

20" 2M x 20" 2M mud cross w/ (2) 7-1/16" 2M side outlets

one outlet 7-1/16" HCR valve w/ 6" blooie line to mud separator & flare pit

one outlet (blank)

20" 2M Annular Preventer

20" 2M flanged btm drilling nipple w/ fillup line

Upper kelly cock valves with handles available

Safety valves and subs to fit all drill string connections in use

Inside BOP or float sub available

### **Testing Procedure:**

#### **Annular Preventer & HCR Valve**

The annular preventer will be functionally operated once per week. All BOP drills will be recorded in the IADC driller's log.

#### **Accumulator:**

The accumulator will have sufficient capacity to open the hydraulically controlled gate valve (if so equipped), close the annular preventer, and retain a minimum of 200 psig above pre-charge on the closing manifold without the use of the closing unit pumps. The reservoir capacity will be double the accumulator capacity, and the fluid level will be maintained at the manufacturer's recommendations. The accumulator shall have two (2) independent power sources to close the preventers. Nitrogen bottles may be one of the independent power sources and, if so, shall maintain a charge equal to the manufacturer's specifications.

### **MUD PROGRAM FOR SURFACE HOLE**

<u>DEPTH</u>	<u>MUD WEIGHT</u>	<u>TYPE</u>	<u>VISC</u>	<u>FLUID LOSS</u>
0 -3500'	9.6 – 10.2	Salt mud	40-55	N/C

Note: Sweep hole every 100 – 200 feet or as needed for hole cleaning. Maintain maximum flowrates for hole cleaning. Use salt gel and FlowZan polymer to maintain properties.

### **CASING PROGRAM FOR SURFACE HOLE**

<u>DEPTH</u>	<u>SIZE</u>	<u>LENGTH</u>	<u>WT</u>	<u>GRADE</u>	<u>THREAD</u>	<u>REMARKS</u>
0 - 3500'	13-3/8"	3500'	68#	J-55	BT&C	

#### Casing Running Sequence:

guide shoe, 1 jt of 13-3/8" 68# J55 BT&C, Float collar, remainder of 13-3/8" 68# J55 BT&C csg to surface. Use centralizers as reqd thru build section. RU cement co., hold safety meeting, test lines, cement 13-3/8" casing using the cementing guide below. Displace with fresh water or mud.

### **CEMENTING PROGRAM FOR SURFACE HOLE**

<b>Lead:</b> 1100 sx hi-fill	Mixed at:	11.0 ppg
	Yield:	3.86 ft <sup>3</sup> /sx
<b>Tail:</b> 600 sx Premium Plus	Mixed at:	15.6 ppg
	Yield:	1.19 ft <sup>3</sup> /sx

**MUST CIRCULATE CEMENT TO SURFACE** If the cement does **not** circulate to surface contact the UDOGM office for further instructions and remedial actions. Be prepared to top out with premium cement.

#### **WOC A TOTAL OF 24 HOURS:**

Wait 4 hours with the hydrostatic pressure of the displacement fluid in place, then cut off conductor and weld on a 13-5/8" 5M x 13-3/8" SOW casing head w/ MBS spool configured to hang either 9-5/8" and/or 7" csg strings without nipping down BOPE. NU a 13-5/8" 5M double ram BOP w/ 5M annular and 5M choke manifold rigged to mud/gas separator, mud tanks and flare pit.

## **PRODUCTION CASING HOLE: 3500' to 11,500'**

Trip in the hole with a 12-1/4" bit, mud motor, MWD & BHA. Drill float, shoe and 20' of new hole. Perform a formation integrity test to 10.5 ppg mud weight equivalent. Directionally drill a 12-1/4" (reduce to 8-1/2" ~ 8000') hole to approximately 11,500' MD (11,250' TVD) using same salt mud system as above. Loss circulation, moving salt, gypsum and anhydrite stringers may be a problem in this interval. Maintain hole angle and azimuth in keeping with the attached directional plan. Production casing should be set into the top of the Chinle Formation.

## **PRESSURE CONTROL AND SAFETY EQUIPMENT FOR PRODUCTION CASING STRING**

### **Bottom to Top (see attached 5M BOP diagram)**

13-5/8" 5M x 13-3/8" SOW casing head w/ (2) 2-1/16" SSO's (for 9-5/8")  
13-5/8" 5M x 13-5/8" 5M multi-bowl casing spool (for 7")  
13-5/8" 5M x 13-5/8" spacer spool  
13-5/8" 5M x 13-5/8" 5M mud cross with (2) side outlets:  
    one outlet 2-1/16" kill line  
    one outlet 2-1/16" choke line  
13-5/8" 5M double ram BOP w/ 5" pipe rams top & CSO rams btm  
13-5/8" 5M Annular Preventer  
13-5/8" 5M rotating head  
    Connect BOP to choke manifold with pressure guage  
    Upper kelly cock valves with handles available  
    Safety valves and subs to fit all drill string connections in use  
    Inside BOP or float sub available

### **Testing Procedure:**

#### **Annular Preventer**

The annular preventer will be pressure tested to 1500 psi for a period of ten minutes or until provisions of the test are met, whichever is longer. At a minimum, the pressure test will be performed:

- 1) When the annular is initially installed
- 2) Whenever any seal subject to test pressure is broken
- 3) Following related repairs and at 30 day intervals

The annular preventer will be functionally operated once per week.

#### **Blowout Preventer**

The BOP, choke manifold and related equipment will be pressure tested to 4500 psi, or 70% of the internal yield of the casing. Pressure will be maintained for a period of at least ten minutes or until the requirements of the test are met, whichever is longer. At a minimum the pressure test will be performed:

- 1) When the BOP is initially installed
- 2) Whenever any seal subject to test pressure is broken
- 3) Following related repairs and at 30 day intervals

The pipe and blind rams will be activated each trip, but not more than once each day. All BOP drills will be recorded in the IADC driller's log.

#### Accumulator:

The accumulator will have sufficient capacity to open the hydraulically controlled gate valve (if so equipped), close all rams plus the annular preventer, and retain a minimum of 200 psig above pre-charge on the closing manifold without the use of the closing unit pumps. The reservoir capacity will be double the accumulator capacity, and the fluid level will be maintained at the manufacturer's recommendations. The accumulator shall have two (2) independent power sources to close the preventers. Nitrogen bottles may be one of the independent power sources and, if so, shall maintain a charge equal to the manufacturer's specifications.

The accumulator pre-charge pressure test will be conducted prior to connecting the closing unit to the BOP stack and at least once every six months thereafter. The accumulator pressure will be corrected if the measured pre-charge pressure is found to be above or below the maximum or minimum limits specified in Onshore Oil & Gas Order Number 2 (only nitrogen gas may be used to pre-charge).

#### Choke Manifold Equipment, Valves and Remote Controls

All choke lines will be straight lines unless turns use tee blocks or are targeted with running tees, and will be anchored to prevent whip and vibration

A valve will be installed in the closing line as close as possible to the annular preventer to act as a locking device. This valve will be maintained in the open position and will be closed only when the power source for the accumulator is inoperative.

Remote controls shall be readily accessible to the driller. Remote controls will be capable of both opening and closing all preventers. Master controls will be at the accumulator and will be capable of opening and closing all preventers and the choke line valve (if so equipped).

The choke manifold and BOP extension rods with hand wheels will be located outside the rig sub structure. The hydraulic BOP closing unit will be located at least twenty-five feet from the well head but readily accessible to the driller.

A flare line will be installed after the choke manifold, extending 100 feet from the center of the drill hole to a separate flare pit.



## MUD PROGRAM FOR PRODUCTION CASING HOLE

DEPTH	MUD WEIGHT	TYPE	VISC	FLUID LOSS
3500' - 11,500'	10.0 - 10.6	Salt Mud	36 - 50	N/C to 12cc

Maintain a salt mud system as salt and gypsum sections are drilled. If loss circulation becomes a problem use LCM sweeps to control seepage & clean hole.

## EVALUATION PROGRAM FOR PRODUCTION HOLE

Mudlogger: From 30" @ 150' to total depth.

At TD, circulate and condition hole clean for logs. Short trip and monitor well closely.

TOH for logs. Run Induction tool as run #1 to determine hole conditions for logging.

Adjust tool configurations depending on hole condition.

Electric Logs:

Tool	Sfc Csg to TD
SDL/DSN/GR	Yes
DLL/MSFL/SP/GR for brine system	Yes
EMI	Yes
NMR	Yes

DST: none planned

Cores: none planned

## CASING PROGRAM FOR PRODUCTION HOLE

DEPTH	SIZE	LENGTH	WT	GRADE	THREAD	REMARKS
0' - TD'	7"	11,500'	26.0#	HCP-110	LT&C	

Rig up casing tools and run 7" production casing as follows:

Float shoe, 1 joint of 7" 26# HCP-110 LT&C casing, float collar then run balance of 7" 26# HCP-110 to surface.

## CEMENT PROGRAM FOR PRODUCTION CASING

**Lead:** 400 sx 50:50 POZ

**Mixed at:** 14.35 ppg

**Yield:** 1.21 ft<sup>3</sup>/sx

**Tail:** none

TOC at  $\pm$  8500 ft in 8-1/2" hole. Calculate cement volume based on log caliper +/- 25%.

Displace cement w/water. Hang 85-90% casing weight in slips, ND, cut off, install B-section and night cap. Clean pits and release rig.

### SCHEDULE

Location preparation is presently scheduled to begin on or about September 15, 2005

Drilling operations are anticipated to begin on or about November 1, 2005

**WOLVERINE GAS & OIL CO. OF UTAH**  
**Wolverine Federal Arapien Valley 24-1**  
**Sanpete County, Utah**



**SECTION DETAILS**

Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	DLeg	TFace	VSec	Target
1	0.0	0.00	36.81	0.0	0.0	0.0	0.00	0.00	0.0	
2	1000.0	0.00	36.81	1000.0	0.0	0.0	0.00	0.00	0.0	
3	1723.2	14.46	36.81	1715.5	72.7	54.4	2.00	36.81	90.8	
4	8827.3	14.46	36.81	8594.5	1493.3	1117.6	0.00	0.00	1865.2	
5	9550.5	0.00	36.81	9310.0	1566.0	1172.0	2.00	180.00	1956.0	Navajo
6	11502.5	0.00	36.81	11262.0	1566.0	1172.0	0.00	36.81	1956.0	TD

**SITE DETAILS**

Wolverine Federal Arapien Valley 24-1  
 SW/NW Sec. 24, T20S, R1E, Sanpete County, Utah  
 2358' FNL & 696' FWL

Ground Level: 5560.0  
 Positional Uncertainty: 0.0  
 Convergence: -0.17

**WELL DETAILS**

Name	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Slot
Wolverine Federal Arapien Valley 24-1	0.0	0.0	2080248.50	477701.40	39°03'21.122N	111°45'27.420W	N/A

**TARGET DETAILS**

Name	TVD	+N/-S	+E/-W	Shape
Navajo	9310.0	1566.0	1172.0	Rectangle (400x400)
TD	11262.0	1566.0	1172.0	Rectangle (400x400)

**FIELD DETAILS**

Utah (Central Zone)  
 Central Utah  
 USA

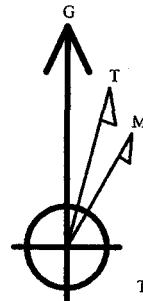
Geodetic System: US State Plane Coordinate System 1983  
 Ellipsoid: GRS 1980  
 Zone: Utah, Central Zone  
 Magnetic Model: igrf2005

System Datum: Mean Sea Level  
 Local North: Grid North

Azimuths to Grid North  
 True North: 0.17°  
 Magnetic North: 12.68°

Magnetic Field  
 Strength: 52094nT  
 Dip Angle: 64.76°  
 Date: 8/2/2005  
 Model: igrf2005

Total Correction: 12.68°

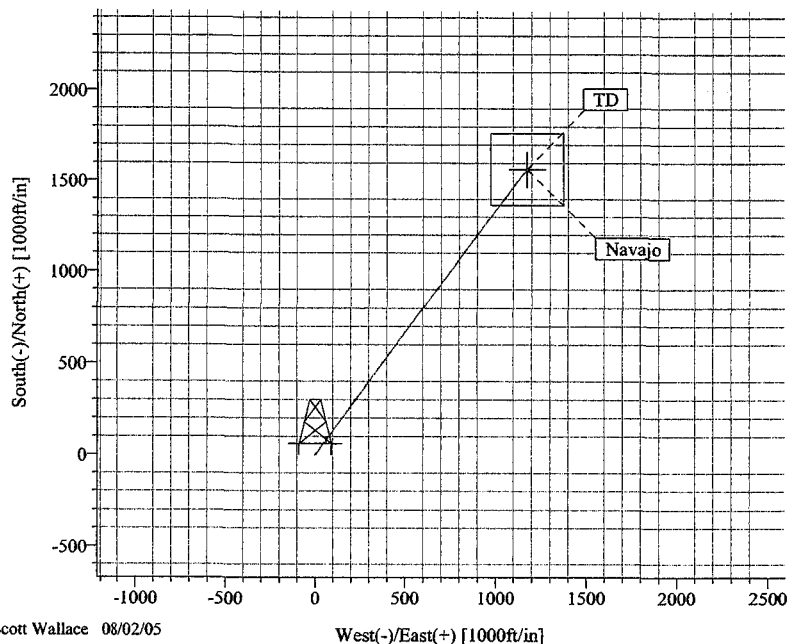
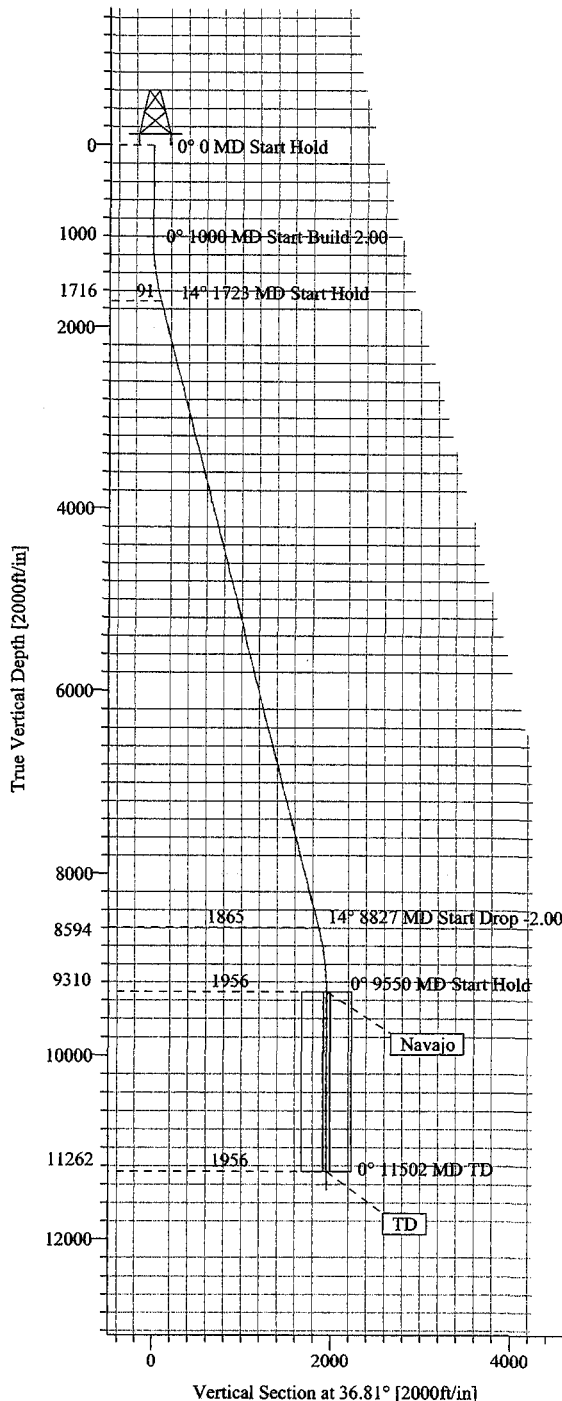


**CASING DETAILS**

No.	TVD	MD	Name	Size
No casings on this wellpath.				

**FORMATION TOP DETAILS**

No.	TVDPath	MDPath	Formation
No formation top details fall on the wellpath.			



Created By: Scott Wallace 08/02/05

West(-)/East(+) [1000ft/in]

**CONFIDENTIAL**

# Weatherford International

## Planning Report

<b>Company:</b> Wolverine Gas & Oil Co of Utah <b>Field:</b> Utah (Central Zone) <b>Site:</b> Wolverine Federal Arapien Valley 24-1 <b>Well:</b> Wolverine Federal Arapien Vall <b>Wellpath:</b> 1	<b>Date:</b> 8/2/2005 <b>Co-ordinate(NE) Reference:</b> Well: Wolverine Federal Arapien Valley 2 <b>Vertical (TVD) Reference:</b> SITE 5560.0 <b>Section (VS) Reference:</b> Well (0.00N,0.00E,36.81Azi) <b>Plan:</b> Plan #1	<b>Time:</b> 11:21:26 <b>Page:</b> 1
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<b>Field:</b> Utah (Central Zone) Central Utah USA <b>Map System:</b> US State Plane Coordinate System 1983 <b>Geo Datum:</b> GRS 1980 <b>Sys Datum:</b> Mean Sea Level	<b>Map Zone:</b> Utah, Central Zone <b>Coordinate System:</b> Well Centre <b>Geomagnetic Model:</b> igrf2005
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**Site:** Wolverine Federal Arapien Valley 24-1  
 SW/NW Sec. 24, T20S, R1E, Sanpete County, Utah  
 2358' FNL & 696' FWL

<b>Site Position:</b>	<b>Northing:</b> m	<b>Latitude:</b>
<b>From:</b> Lease Line	<b>Easting:</b> m	<b>Longitude:</b>
<b>Position Uncertainty:</b> 0.0 ft		<b>North Reference:</b> Grid
<b>Ground Level:</b> 5560.0 ft		<b>Grid Convergence:</b> -0.17 deg

<b>Well:</b> Wolverine Federal Arapien Vall	<b>Slot Name:</b>
<b>Well Position:</b> +N/-S 0.0 ft Northing: 2080248.50 m	<b>Latitude:</b> 39 3 21.122 N
+E/-W 0.0 ft Easting: 477701.40 m	<b>Longitude:</b> 111 45 27.420 W
<b>Position Uncertainty:</b> 0.0 ft	

<b>Wellpath:</b> 1	<b>Drilled From:</b> Surface	
<b>Current Datum:</b> SITE	<b>Tie-on Depth:</b> 0.0 ft	
<b>Magnetic Data:</b> 8/2/2005	<b>Above System Datum:</b> Mean Sea Level	
<b>Field Strength:</b> 52094 nT	<b>Declination:</b> 12.52 deg	
<b>Vertical Section:</b> Depth From (TVD)	<b>Mag Dip Angle:</b> 64.76 deg	
ft	+N/-S ft	+E/-W ft
11262.0	0.0	0.0
		36.81

<b>Plan:</b> Plan #1	<b>Date Composed:</b> 8/2/2005
<b>Principal:</b> Yes	<b>Version:</b> 1
	<b>Tied-to:</b> From Surface

### Plan Section Information

MD ft	Incl deg	Azim deg	TVD ft	+N/-S ft	+E/-W ft	DLS deg/100ft	Build deg/100ft	Turn deg/100ft	TFO deg	Target
0.0	0.00	36.81	0.0	0.0	0.0	0.00	0.00	0.00	0.00	
1000.0	0.00	36.81	1000.0	0.0	0.0	0.00	0.00	0.00	0.00	
1723.2	14.46	36.81	1715.5	72.7	54.4	2.00	2.00	0.00	36.81	
8827.3	14.46	36.81	8594.5	1493.3	1117.6	0.00	0.00	0.00	0.00	
9550.5	0.00	36.81	9310.0	1566.0	1172.0	2.00	-2.00	0.00	180.00	Navajo
11502.5	0.00	36.81	11262.0	1566.0	1172.0	0.00	0.00	0.00	36.81	TD

### Section 1 : Start Hold

MD ft	Incl deg	Azim deg	TVD ft	+N/-S ft	+E/-W ft	VS ft	DLS deg/100ft	Build deg/100ft	Turn deg/100ft	TFO deg
0.0	0.00	36.81	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00
100.0	0.00	36.81	100.0	0.0	0.0	0.0	0.00	0.00	0.00	36.81
200.0	0.00	36.81	200.0	0.0	0.0	0.0	0.00	0.00	0.00	36.81
300.0	0.00	36.81	300.0	0.0	0.0	0.0	0.00	0.00	0.00	36.81
400.0	0.00	36.81	400.0	0.0	0.0	0.0	0.00	0.00	0.00	36.81
500.0	0.00	36.81	500.0	0.0	0.0	0.0	0.00	0.00	0.00	36.81
600.0	0.00	36.81	600.0	0.0	0.0	0.0	0.00	0.00	0.00	36.81
700.0	0.00	36.81	700.0	0.0	0.0	0.0	0.00	0.00	0.00	36.81
800.0	0.00	36.81	800.0	0.0	0.0	0.0	0.00	0.00	0.00	36.81
900.0	0.00	36.81	900.0	0.0	0.0	0.0	0.00	0.00	0.00	36.81
1000.0	0.00	36.81	1000.0	0.0	0.0	0.0	0.00	0.00	0.00	36.81

### Section 2 : Start Build 2.00

MD ft	Incl deg	Azim deg	TVD ft	+N/-S ft	+E/-W ft	VS ft	DLS deg/100ft	Build deg/100ft	Turn deg/100ft	TFO deg
1100.0	2.00	36.81	1100.0	1.4	1.0	1.7	2.00	2.00	0.00	0.00
1200.0	4.00	36.81	1199.8	5.6	4.2	7.0	2.00	2.00	0.00	0.00

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# Weatherford International

## Planning Report

**Company:** Wolverine Gas & Oil Co of Utah  
**Field:** Utah (Central Zone)  
**Site:** Wolverine Federal Arapien Valley 24-1  
**Well:** Wolverine Federal Arapien Vall  
**Wellpath:** 1

**Date:** 8/2/2005 **Time:** 11:21:26 **Page:** 2  
**Co-ordinate(NE) Reference:** Well: Wolverine Federal Arapien Valley 2  
**Vertical (TVD) Reference:** SITE 5560.0  
**Section (VS) Reference:** Well (0.00N,0.00E,36.81Azi)  
**Plan:** Plan #1

### Section 2 : Start Build 2.00

MD ft	Incl deg	Azim deg	TVD ft	+N/-S ft	+E/-W ft	VS ft	DLS deg/100ft	Build deg/100ft	Turn deg/100ft	TFO deg
1300.0	6.00	36.81	1299.5	12.6	9.4	15.7	2.00	2.00	0.00	0.00
1400.0	8.00	36.81	1398.7	22.3	16.7	27.9	2.00	2.00	0.00	0.00
1500.0	10.00	36.81	1497.5	34.8	26.1	43.5	2.00	2.00	0.00	0.00
1600.0	12.00	36.81	1595.6	50.1	37.5	62.6	2.00	2.00	0.00	0.00
1700.0	14.00	36.81	1693.1	68.1	51.0	85.1	2.00	2.00	0.00	0.00
1723.2	14.46	36.81	1715.5	72.7	54.4	90.8	2.00	2.00	0.00	0.00

### Section 3 : Start Hold

MD ft	Incl deg	Azim deg	TVD ft	+N/-S ft	+E/-W ft	VS ft	DLS deg/100ft	Build deg/100ft	Turn deg/100ft	TFO deg
1800.0	14.46	36.81	1789.9	88.1	65.9	110.0	0.00	0.00	0.00	0.00
1900.0	14.46	36.81	1886.7	108.1	80.9	135.0	0.00	0.00	0.00	0.00
2000.0	14.46	36.81	1983.6	128.0	95.8	159.9	0.00	0.00	0.00	0.00
2100.0	14.46	36.81	2080.4	148.0	110.8	184.9	0.00	0.00	0.00	0.00
2200.0	14.46	36.81	2177.2	168.0	125.8	209.9	0.00	0.00	0.00	0.00
2300.0	14.46	36.81	2274.1	188.0	140.7	234.9	0.00	0.00	0.00	0.00
2400.0	14.46	36.81	2370.9	208.0	155.7	259.8	0.00	0.00	0.00	0.00
2500.0	14.46	36.81	2467.7	228.0	170.7	284.8	0.00	0.00	0.00	0.00
2600.0	14.46	36.81	2564.6	248.0	185.6	309.8	0.00	0.00	0.00	0.00
2700.0	14.46	36.81	2661.4	268.0	200.6	334.8	0.00	0.00	0.00	0.00
2800.0	14.46	36.81	2758.2	288.0	215.6	359.8	0.00	0.00	0.00	0.00
2900.0	14.46	36.81	2855.0	308.0	230.5	384.7	0.00	0.00	0.00	0.00
3000.0	14.46	36.81	2951.9	328.0	245.5	409.7	0.00	0.00	0.00	0.00
3100.0	14.46	36.81	3048.7	348.0	260.5	434.7	0.00	0.00	0.00	0.00
3200.0	14.46	36.81	3145.5	368.0	275.4	459.7	0.00	0.00	0.00	0.00
3300.0	14.46	36.81	3242.4	388.0	290.4	484.6	0.00	0.00	0.00	0.00
3400.0	14.46	36.81	3339.2	408.0	305.4	509.6	0.00	0.00	0.00	0.00
3500.0	14.46	36.81	3436.0	428.0	320.3	534.6	0.00	0.00	0.00	0.00
3600.0	14.46	36.81	3532.9	448.0	335.3	559.6	0.00	0.00	0.00	0.00
3700.0	14.46	36.81	3629.7	468.0	350.3	584.5	0.00	0.00	0.00	0.00
3800.0	14.46	36.81	3726.5	488.0	365.2	609.5	0.00	0.00	0.00	0.00
3900.0	14.46	36.81	3823.3	508.0	380.2	634.5	0.00	0.00	0.00	0.00
4000.0	14.46	36.81	3920.2	528.0	395.1	659.5	0.00	0.00	0.00	0.00
4100.0	14.46	36.81	4017.0	548.0	410.1	684.5	0.00	0.00	0.00	0.00
4200.0	14.46	36.81	4113.8	568.0	425.1	709.4	0.00	0.00	0.00	0.00
4300.0	14.46	36.81	4210.7	588.0	440.0	734.4	0.00	0.00	0.00	0.00
4400.0	14.46	36.81	4307.5	608.0	455.0	759.4	0.00	0.00	0.00	0.00
4500.0	14.46	36.81	4404.3	628.0	470.0	784.4	0.00	0.00	0.00	0.00
4600.0	14.46	36.81	4501.2	648.0	484.9	809.3	0.00	0.00	0.00	0.00
4700.0	14.46	36.81	4598.0	668.0	499.9	834.3	0.00	0.00	0.00	0.00
4800.0	14.46	36.81	4694.8	688.0	514.9	859.3	0.00	0.00	0.00	0.00
4900.0	14.46	36.81	4791.7	708.0	529.8	884.3	0.00	0.00	0.00	0.00
5000.0	14.46	36.81	4888.5	728.0	544.8	909.3	0.00	0.00	0.00	0.00
5100.0	14.46	36.81	4985.3	748.0	559.8	934.2	0.00	0.00	0.00	0.00
5200.0	14.46	36.81	5082.1	768.0	574.7	959.2	0.00	0.00	0.00	0.00
5300.0	14.46	36.81	5179.0	788.0	589.7	984.2	0.00	0.00	0.00	0.00
5400.0	14.46	36.81	5275.8	807.9	604.7	1009.2	0.00	0.00	0.00	0.00
5500.0	14.46	36.81	5372.6	827.9	619.6	1034.1	0.00	0.00	0.00	0.00
5600.0	14.46	36.81	5469.5	847.9	634.6	1059.1	0.00	0.00	0.00	0.00
5700.0	14.46	36.81	5566.3	867.9	649.6	1084.1	0.00	0.00	0.00	0.00
5800.0	14.46	36.81	5663.1	887.9	664.5	1109.1	0.00	0.00	0.00	0.00
5900.0	14.46	36.81	5760.0	907.9	679.5	1134.0	0.00	0.00	0.00	0.00
6000.0	14.46	36.81	5856.8	927.9	694.5	1159.0	0.00	0.00	0.00	0.00
6100.0	14.46	36.81	5953.6	947.9	709.4	1184.0	0.00	0.00	0.00	0.00
6200.0	14.46	36.81	6050.4	967.9	724.4	1209.0	0.00	0.00	0.00	0.00
6300.0	14.46	36.81	6147.3	987.9	739.4	1234.0	0.00	0.00	0.00	0.00
6400.0	14.46	36.81	6244.1	1007.9	754.3	1258.9	0.00	0.00	0.00	0.00
6500.0	14.46	36.81	6340.9	1027.9	769.3	1283.9	0.00	0.00	0.00	0.00
6600.0	14.46	36.81	6437.8	1047.9	784.3	1308.9	0.00	0.00	0.00	0.00
6700.0	14.46	36.81	6534.6	1067.9	799.2	1333.9	0.00	0.00	0.00	0.00
6800.0	14.46	36.81	6631.4	1087.9	814.2	1358.8	0.00	0.00	0.00	0.00
6900.0	14.46	36.81	6728.3	1107.9	829.2	1383.8	0.00	0.00	0.00	0.00
7000.0	14.46	36.81	6825.1	1127.9	844.1	1408.8	0.00	0.00	0.00	0.00

**CONFIDENTIAL**

# Weatherford International

## Planning Report

**Company:** Wolverine Gas & Oil Co of Utah  
**Field:** Utah (Central Zone)  
**Site:** Wolverine Federal Arapien Valley 24-1  
**Well:** Wolverine Federal Arapien Vall  
**Wellpath:** 1

**Date:** 8/2/2005 **Time:** 11:21:26 **Page:** 3  
**Co-ordinate(NE) Reference:** Well: Wolverine Federal Arapien Valley 2  
**Vertical (TVD) Reference:** SITE 5560.0  
**Section (VS) Reference:** Well (0.00N,0.00E,36.81Azi)  
**Plan:** Plan #1

### Section 3 : Start Hold

MD ft	Incl deg	Azim deg	TVD ft	+N/-S ft	+E/-W ft	VS ft	DLS deg/100ft	Build deg/100ft	Turn deg/100ft	TFO deg
7100.0	14.46	36.81	6921.9	1147.9	859.1	1433.8	0.00	0.00	0.00	0.00
7200.0	14.46	36.81	7018.8	1167.9	874.1	1458.8	0.00	0.00	0.00	0.00
7300.0	14.46	36.81	7115.6	1187.9	889.0	1483.7	0.00	0.00	0.00	0.00
7400.0	14.46	36.81	7212.4	1207.9	904.0	1508.7	0.00	0.00	0.00	0.00
7500.0	14.46	36.81	7309.2	1227.9	919.0	1533.7	0.00	0.00	0.00	0.00
7600.0	14.46	36.81	7406.1	1247.9	933.9	1558.7	0.00	0.00	0.00	0.00
7700.0	14.46	36.81	7502.9	1267.9	948.9	1583.6	0.00	0.00	0.00	0.00
7800.0	14.46	36.81	7599.7	1287.9	963.9	1608.6	0.00	0.00	0.00	0.00
7900.0	14.46	36.81	7696.6	1307.9	978.8	1633.6	0.00	0.00	0.00	0.00
8000.0	14.46	36.81	7793.4	1327.9	993.8	1658.6	0.00	0.00	0.00	0.00
8100.0	14.46	36.81	7890.2	1347.9	1008.8	1683.5	0.00	0.00	0.00	0.00
8200.0	14.46	36.81	7987.1	1367.9	1023.7	1708.5	0.00	0.00	0.00	0.00
8300.0	14.46	36.81	8083.9	1387.9	1038.7	1733.5	0.00	0.00	0.00	0.00
8400.0	14.46	36.81	8180.7	1407.9	1053.6	1758.5	0.00	0.00	0.00	0.00
8500.0	14.46	36.81	8277.6	1427.9	1068.6	1783.5	0.00	0.00	0.00	0.00
8600.0	14.46	36.81	8374.4	1447.9	1083.6	1808.4	0.00	0.00	0.00	0.00
8700.0	14.46	36.81	8471.2	1467.9	1098.5	1833.4	0.00	0.00	0.00	0.00
8800.0	14.46	36.81	8568.0	1487.8	1113.5	1858.4	0.00	0.00	0.00	0.00
8827.3	14.46	36.81	8594.5	1493.3	1117.6	1865.2	0.00	0.00	0.00	0.00

### Section 4 : Start Drop -2.00

MD ft	Incl deg	Azim deg	TVD ft	+N/-S ft	+E/-W ft	VS ft	DLS deg/100ft	Build deg/100ft	Turn deg/100ft	TFO deg
8900.0	13.01	36.81	8665.1	1507.1	1127.9	1882.5	2.00	-2.00	0.00	-180.00
9000.0	11.01	36.81	8762.9	1523.8	1140.4	1903.3	2.00	-2.00	0.00	180.00
9100.0	9.01	36.81	8861.4	1537.7	1150.8	1920.7	2.00	-2.00	0.00	180.00
9200.0	7.01	36.81	8960.4	1548.9	1159.2	1934.6	2.00	-2.00	0.00	-180.00
9300.0	5.01	36.81	9059.8	1557.2	1165.4	1945.1	2.00	-2.00	0.00	180.00
9400.0	3.01	36.81	9159.6	1562.8	1169.6	1952.0	2.00	-2.00	0.00	-180.00
9500.0	1.01	36.81	9259.5	1565.6	1171.7	1955.6	2.00	-2.00	0.00	180.00
9550.5	0.00	36.81	9310.0	1566.0	1172.0	1956.0	2.00	-2.00	0.00	-180.00

### Section 5 : Start Hold

MD ft	Incl deg	Azim deg	TVD ft	+N/-S ft	+E/-W ft	VS ft	DLS deg/100ft	Build deg/100ft	Turn deg/100ft	TFO deg
9600.0	0.00	36.81	9359.5	1566.0	1172.0	1956.0	0.00	0.00	0.00	36.81
9700.0	0.00	36.81	9459.5	1566.0	1172.0	1956.0	0.00	0.00	0.00	36.81
9800.0	0.00	36.81	9559.5	1566.0	1172.0	1956.0	0.00	0.00	0.00	36.81
9900.0	0.00	36.81	9659.5	1566.0	1172.0	1956.0	0.00	0.00	0.00	36.81
10000.0	0.00	36.81	9759.5	1566.0	1172.0	1956.0	0.00	0.00	0.00	36.81
10100.0	0.00	36.81	9859.5	1566.0	1172.0	1956.0	0.00	0.00	0.00	36.81
10200.0	0.00	36.81	9959.5	1566.0	1172.0	1956.0	0.00	0.00	0.00	36.81
10300.0	0.00	36.81	10059.5	1566.0	1172.0	1956.0	0.00	0.00	0.00	36.81
10400.0	0.00	36.81	10159.5	1566.0	1172.0	1956.0	0.00	0.00	0.00	36.81
10500.0	0.00	36.81	10259.5	1566.0	1172.0	1956.0	0.00	0.00	0.00	36.81
10600.0	0.00	36.81	10359.5	1566.0	1172.0	1956.0	0.00	0.00	0.00	36.81
10700.0	0.00	36.81	10459.5	1566.0	1172.0	1956.0	0.00	0.00	0.00	36.81
10800.0	0.00	36.81	10559.5	1566.0	1172.0	1956.0	0.00	0.00	0.00	36.81
10900.0	0.00	36.81	10659.5	1566.0	1172.0	1956.0	0.00	0.00	0.00	36.81
11000.0	0.00	36.81	10759.5	1566.0	1172.0	1956.0	0.00	0.00	0.00	36.81
11100.0	0.00	36.81	10859.5	1566.0	1172.0	1956.0	0.00	0.00	0.00	36.81
11200.0	0.00	36.81	10959.5	1566.0	1172.0	1956.0	0.00	0.00	0.00	36.81
11300.0	0.00	36.81	11059.5	1566.0	1172.0	1956.0	0.00	0.00	0.00	36.81
11400.0	0.00	36.81	11159.5	1566.0	1172.0	1956.0	0.00	0.00	0.00	36.81
11502.5	0.00	36.81	11262.0	1566.0	1172.0	1956.0	0.00	0.00	0.00	36.81

**CONFIDENTIAL**

# Weatherford International

## Planning Report

**Company:** Wolverine Gas & Oil Co of Utah  
**Field:** Utah (Central Zone)  
**Site:** Wolverine Federal Arapien Valley 24-1  
**Well:** Wolverine Federal Arapien Vall  
**Wellpath:** 1

**Date:** 8/2/2005 **Time:** 11:21:26 **Page:** 4  
**Co-ordinate(NE) Reference:** Well: Wolverine Federal Arapien Valley 2  
**Vertical (TVD) Reference:** SITE 5560.0  
**Section (VS) Reference:** Well (0.00N,0.00E,36.81Azi)  
**Plan:** Plan #1

### Survey

MD ft	Incl deg	Azim deg	TVD ft	+N/-S ft	+E/-W ft	VS ft	DLS deg/100ft	Build deg/100ft	Turn deg/100ft	Tool/Comment
0.0	0.00	36.81	0.0	0.0	0.0	0.0	0.00	0.00	0.00	
100.0	0.00	36.81	100.0	0.0	0.0	0.0	0.00	0.00	0.00	MWD
200.0	0.00	36.81	200.0	0.0	0.0	0.0	0.00	0.00	0.00	MWD
300.0	0.00	36.81	300.0	0.0	0.0	0.0	0.00	0.00	0.00	MWD
400.0	0.00	36.81	400.0	0.0	0.0	0.0	0.00	0.00	0.00	MWD
500.0	0.00	36.81	500.0	0.0	0.0	0.0	0.00	0.00	0.00	MWD
600.0	0.00	36.81	600.0	0.0	0.0	0.0	0.00	0.00	0.00	MWD
700.0	0.00	36.81	700.0	0.0	0.0	0.0	0.00	0.00	0.00	MWD
800.0	0.00	36.81	800.0	0.0	0.0	0.0	0.00	0.00	0.00	MWD
900.0	0.00	36.81	900.0	0.0	0.0	0.0	0.00	0.00	0.00	MWD
1000.0	0.00	36.81	1000.0	0.0	0.0	0.0	0.00	0.00	0.00	MWD
1100.0	2.00	36.81	1100.0	1.4	1.0	1.7	2.00	2.00	0.00	MWD
1200.0	4.00	36.81	1199.8	5.6	4.2	7.0	2.00	2.00	0.00	MWD
1300.0	6.00	36.81	1299.5	12.6	9.4	15.7	2.00	2.00	0.00	MWD
1400.0	8.00	36.81	1398.7	22.3	16.7	27.9	2.00	2.00	0.00	MWD
1500.0	10.00	36.81	1497.5	34.8	26.1	43.5	2.00	2.00	0.00	MWD
1600.0	12.00	36.81	1595.6	50.1	37.5	62.6	2.00	2.00	0.00	MWD
1700.0	14.00	36.81	1693.1	68.1	51.0	85.1	2.00	2.00	0.00	MWD
1723.2	14.46	36.81	1715.5	72.7	54.4	90.8	2.00	2.00	0.00	MWD
1800.0	14.46	36.81	1789.9	88.1	65.9	110.0	0.00	0.00	0.00	MWD
1900.0	14.46	36.81	1886.7	108.1	80.9	135.0	0.00	0.00	0.00	MWD
2000.0	14.46	36.81	1983.6	128.0	95.8	159.9	0.00	0.00	0.00	MWD
2100.0	14.46	36.81	2080.4	148.0	110.8	184.9	0.00	0.00	0.00	MWD
2200.0	14.46	36.81	2177.2	168.0	125.8	209.9	0.00	0.00	0.00	MWD
2300.0	14.46	36.81	2274.1	188.0	140.7	234.9	0.00	0.00	0.00	MWD
2400.0	14.46	36.81	2370.9	208.0	155.7	259.8	0.00	0.00	0.00	MWD
2500.0	14.46	36.81	2467.7	228.0	170.7	284.8	0.00	0.00	0.00	MWD
2600.0	14.46	36.81	2564.6	248.0	185.6	309.8	0.00	0.00	0.00	MWD
2700.0	14.46	36.81	2661.4	268.0	200.6	334.8	0.00	0.00	0.00	MWD
2800.0	14.46	36.81	2758.2	288.0	215.6	359.8	0.00	0.00	0.00	MWD
2900.0	14.46	36.81	2855.0	308.0	230.5	384.7	0.00	0.00	0.00	MWD
3000.0	14.46	36.81	2951.9	328.0	245.5	409.7	0.00	0.00	0.00	MWD
3100.0	14.46	36.81	3048.7	348.0	260.5	434.7	0.00	0.00	0.00	MWD
3200.0	14.46	36.81	3145.5	368.0	275.4	459.7	0.00	0.00	0.00	MWD
3300.0	14.46	36.81	3242.4	388.0	290.4	484.6	0.00	0.00	0.00	MWD
3400.0	14.46	36.81	3339.2	408.0	305.4	509.6	0.00	0.00	0.00	MWD
3500.0	14.46	36.81	3436.0	428.0	320.3	534.6	0.00	0.00	0.00	MWD
3600.0	14.46	36.81	3532.9	448.0	335.3	559.6	0.00	0.00	0.00	MWD
3700.0	14.46	36.81	3629.7	468.0	350.3	584.5	0.00	0.00	0.00	MWD
3800.0	14.46	36.81	3726.5	488.0	365.2	609.5	0.00	0.00	0.00	MWD
3900.0	14.46	36.81	3823.3	508.0	380.2	634.5	0.00	0.00	0.00	MWD
4000.0	14.46	36.81	3920.2	528.0	395.1	659.5	0.00	0.00	0.00	MWD
4100.0	14.46	36.81	4017.0	548.0	410.1	684.5	0.00	0.00	0.00	MWD
4200.0	14.46	36.81	4113.8	568.0	425.1	709.4	0.00	0.00	0.00	MWD
4300.0	14.46	36.81	4210.7	588.0	440.0	734.4	0.00	0.00	0.00	MWD
4400.0	14.46	36.81	4307.5	608.0	455.0	759.4	0.00	0.00	0.00	MWD
4500.0	14.46	36.81	4404.3	628.0	470.0	784.4	0.00	0.00	0.00	MWD
4600.0	14.46	36.81	4501.2	648.0	484.9	809.3	0.00	0.00	0.00	MWD
4700.0	14.46	36.81	4598.0	668.0	499.9	834.3	0.00	0.00	0.00	MWD
4800.0	14.46	36.81	4694.8	688.0	514.9	859.3	0.00	0.00	0.00	MWD
4900.0	14.46	36.81	4791.7	708.0	529.8	884.3	0.00	0.00	0.00	MWD
5000.0	14.46	36.81	4888.5	728.0	544.8	909.3	0.00	0.00	0.00	MWD
5100.0	14.46	36.81	4985.3	748.0	559.8	934.2	0.00	0.00	0.00	MWD
5200.0	14.46	36.81	5082.1	768.0	574.7	959.2	0.00	0.00	0.00	MWD

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# Weatherford International

## Planning Report

**Company:** Wolverine Gas & Oil Co of Utah  
**Field:** Utah (Central Zone)  
**Site:** Wolverine Federal Arapien Valley 24-1  
**Well:** Wolverine Federal Arapien Vall  
**Wellpath:** 1

**Date:** 8/2/2005 **Time:** 11:21:26 **Page:** 5  
**Co-ordinate(NE) Reference:** Well: Wolverine Federal Arapien Valley 2  
**Vertical (TVD) Reference:** SITE 5560.0  
**Section (VS) Reference:** Well (0.00N,0.00E,36.81Azi)  
**Plan:** Plan #1

### Survey

MD ft	Incl deg	Azim deg	TVD ft	+N/-S ft	+E/-W ft	VS ft	DLS deg/100ft	Build deg/100ft	Turn deg/100ft	Tool/Comment
5300.0	14.46	36.81	5179.0	788.0	589.7	984.2	0.00	0.00	0.00	MWD
5400.0	14.46	36.81	5275.8	807.9	604.7	1009.2	0.00	0.00	0.00	MWD
5500.0	14.46	36.81	5372.6	827.9	619.6	1034.1	0.00	0.00	0.00	MWD
5600.0	14.46	36.81	5469.5	847.9	634.6	1059.1	0.00	0.00	0.00	MWD
5700.0	14.46	36.81	5566.3	867.9	649.6	1084.1	0.00	0.00	0.00	MWD
5800.0	14.46	36.81	5663.1	887.9	664.5	1109.1	0.00	0.00	0.00	MWD
5900.0	14.46	36.81	5760.0	907.9	679.5	1134.0	0.00	0.00	0.00	MWD
6000.0	14.46	36.81	5856.8	927.9	694.5	1159.0	0.00	0.00	0.00	MWD
6100.0	14.46	36.81	5953.6	947.9	709.4	1184.0	0.00	0.00	0.00	MWD
6200.0	14.46	36.81	6050.4	967.9	724.4	1209.0	0.00	0.00	0.00	MWD
6300.0	14.46	36.81	6147.3	987.9	739.4	1234.0	0.00	0.00	0.00	MWD
6400.0	14.46	36.81	6244.1	1007.9	754.3	1258.9	0.00	0.00	0.00	MWD
6500.0	14.46	36.81	6340.9	1027.9	769.3	1283.9	0.00	0.00	0.00	MWD
6600.0	14.46	36.81	6437.8	1047.9	784.3	1308.9	0.00	0.00	0.00	MWD
6700.0	14.46	36.81	6534.6	1067.9	799.2	1333.9	0.00	0.00	0.00	MWD
6800.0	14.46	36.81	6631.4	1087.9	814.2	1358.8	0.00	0.00	0.00	MWD
6900.0	14.46	36.81	6728.3	1107.9	829.2	1383.8	0.00	0.00	0.00	MWD
7000.0	14.46	36.81	6825.1	1127.9	844.1	1408.8	0.00	0.00	0.00	MWD
7100.0	14.46	36.81	6921.9	1147.9	859.1	1433.8	0.00	0.00	0.00	MWD
7200.0	14.46	36.81	7018.8	1167.9	874.1	1458.8	0.00	0.00	0.00	MWD
7300.0	14.46	36.81	7115.6	1187.9	889.0	1483.7	0.00	0.00	0.00	MWD
7400.0	14.46	36.81	7212.4	1207.9	904.0	1508.7	0.00	0.00	0.00	MWD
7500.0	14.46	36.81	7309.2	1227.9	919.0	1533.7	0.00	0.00	0.00	MWD
7600.0	14.46	36.81	7406.1	1247.9	933.9	1558.7	0.00	0.00	0.00	MWD
7700.0	14.46	36.81	7502.9	1267.9	948.9	1583.6	0.00	0.00	0.00	MWD
7800.0	14.46	36.81	7599.7	1287.9	963.9	1608.6	0.00	0.00	0.00	MWD
7900.0	14.46	36.81	7696.6	1307.9	978.8	1633.6	0.00	0.00	0.00	MWD
8000.0	14.46	36.81	7793.4	1327.9	993.8	1658.6	0.00	0.00	0.00	MWD
8100.0	14.46	36.81	7890.2	1347.9	1008.8	1683.5	0.00	0.00	0.00	MWD
8200.0	14.46	36.81	7987.1	1367.9	1023.7	1708.5	0.00	0.00	0.00	MWD
8300.0	14.46	36.81	8083.9	1387.9	1038.7	1733.5	0.00	0.00	0.00	MWD
8400.0	14.46	36.81	8180.7	1407.9	1053.6	1758.5	0.00	0.00	0.00	MWD
8500.0	14.46	36.81	8277.6	1427.9	1068.6	1783.5	0.00	0.00	0.00	MWD
8600.0	14.46	36.81	8374.4	1447.9	1083.6	1808.4	0.00	0.00	0.00	MWD
8700.0	14.46	36.81	8471.2	1467.9	1098.5	1833.4	0.00	0.00	0.00	MWD
8800.0	14.46	36.81	8568.0	1487.8	1113.5	1858.4	0.00	0.00	0.00	MWD
8827.3	14.46	36.81	8594.5	1493.3	1117.6	1865.2	0.00	0.00	0.00	MWD
8900.0	13.01	36.81	8665.1	1507.1	1127.9	1882.5	2.00	-2.00	0.00	MWD
9000.0	11.01	36.81	8762.9	1523.8	1140.4	1903.3	2.00	-2.00	0.00	MWD
9100.0	9.01	36.81	8861.4	1537.7	1150.8	1920.7	2.00	-2.00	0.00	MWD
9200.0	7.01	36.81	8960.4	1548.9	1159.2	1934.6	2.00	-2.00	0.00	MWD
9300.0	5.01	36.81	9059.8	1557.2	1165.4	1945.1	2.00	-2.00	0.00	MWD
9400.0	3.01	36.81	9159.6	1562.8	1169.6	1952.0	2.00	-2.00	0.00	MWD
9500.0	1.01	36.81	9259.5	1565.6	1171.7	1955.6	2.00	-2.00	0.00	MWD
9550.5	0.00	36.81	9310.0	1566.0	1172.0	1956.0	2.00	-2.00	0.00	Navajo
9600.0	0.00	36.81	9359.5	1566.0	1172.0	1956.0	0.00	0.00	0.00	MWD
9700.0	0.00	36.81	9459.5	1566.0	1172.0	1956.0	0.00	0.00	0.00	MWD
9800.0	0.00	36.81	9559.5	1566.0	1172.0	1956.0	0.00	0.00	0.00	MWD
9900.0	0.00	36.81	9659.5	1566.0	1172.0	1956.0	0.00	0.00	0.00	MWD
10000.0	0.00	36.81	9759.5	1566.0	1172.0	1956.0	0.00	0.00	0.00	MWD
10100.0	0.00	36.81	9859.5	1566.0	1172.0	1956.0	0.00	0.00	0.00	MWD
10200.0	0.00	36.81	9959.5	1566.0	1172.0	1956.0	0.00	0.00	0.00	MWD
10300.0	0.00	36.81	10059.5	1566.0	1172.0	1956.0	0.00	0.00	0.00	MWD

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# Weatherford International

## Planning Report

**Company:** Wolverine Gas & Oil Co of Utah  
**Field:** Utah (Central Zone)  
**Site:** Wolverine Federal Arapien Valley 24-1  
**Well:** Wolverine Federal Arapien Vall  
**Wellpath:** 1

**Date:** 8/2/2005 **Time:** 11:21:26 **Page:** 6  
**Co-ordinate(NE) Reference:** Well: Wolverine Federal Arapien Valley 2  
**Vertical (TVD) Reference:** SITE 5560.0  
**Section (VS) Reference:** Well (0.00N,0.00E,36.81Azi)  
**Plan:** Plan #1

### Survey

MD ft	Incl deg	Azim deg	TVD ft	+N/-S ft	+E/-W ft	VS ft	DLS deg/100ft	Build deg/100ft	Turn deg/100ft	Tool/Comment
10400.0	0.00	36.81	10159.5	1566.0	1172.0	1956.0	0.00	0.00	0.00	MWD
10500.0	0.00	36.81	10259.5	1566.0	1172.0	1956.0	0.00	0.00	0.00	MWD
10600.0	0.00	36.81	10359.5	1566.0	1172.0	1956.0	0.00	0.00	0.00	MWD
10700.0	0.00	36.81	10459.5	1566.0	1172.0	1956.0	0.00	0.00	0.00	MWD
10800.0	0.00	36.81	10559.5	1566.0	1172.0	1956.0	0.00	0.00	0.00	MWD
10900.0	0.00	36.81	10659.5	1566.0	1172.0	1956.0	0.00	0.00	0.00	MWD
11000.0	0.00	36.81	10759.5	1566.0	1172.0	1956.0	0.00	0.00	0.00	MWD
11100.0	0.00	36.81	10859.5	1566.0	1172.0	1956.0	0.00	0.00	0.00	MWD
11200.0	0.00	36.81	10959.5	1566.0	1172.0	1956.0	0.00	0.00	0.00	MWD
11300.0	0.00	36.81	11059.5	1566.0	1172.0	1956.0	0.00	0.00	0.00	MWD
11400.0	0.00	36.81	11159.5	1566.0	1172.0	1956.0	0.00	0.00	0.00	MWD
11502.5	0.00	36.81	11262.0	1566.0	1172.0	1956.0	0.00	0.00	0.00	TD

### Targets

Name	Description Dip.	Dir.	TVD ft	+N/-S ft	+E/-W ft	Map Northing m	Map Easting m	← Latitude → Deg Min Sec			← Longitude → Deg Min Sec		
Navajo			9310.0	1566.0	1172.0	2080725.82	478058.62	39	3	36.633 N	111	45	12.619 W
	-Rectangle (400x400)												
	-Plan hit target												
TD			11262.0	1566.0	1172.0	2080725.82	478058.62	39	3	36.633 N	111	45	12.619 W
	-Rectangle (400x400)												
	-Plan hit target												

**CONFIDENTIAL**



# **PRESSURE CONTROL SYSTEM SCHEMATIC**

Prepared by:  
EXACT Engineering, Inc  
Tulsa, OK (918) 599-9400

**2M Diverter Stack** — to be utilized while drilling holes for surface casing thru upper Arapien formation section

Operator:

Wolverine Gas & Oil Co. of Utah, LLC

Well name and number

Wolverine Federal Arapien Valley 24-1

Max. anticipated surface pressure 800 psi

Annular B.O.P. 20" 2M W.P.

B.O.P. none Rams none" na W.P.  
(Pipe/Blind)

B.O.P. none Rams \_\_\_\_\_" \_\_\_\_\_ W.P.  
(Pipe/Blind)

Check Valve none" \_\_\_\_\_ W.P.

Valve none" \_\_\_\_\_ W.P.

Valve blind flange W.P.

Valve 7-1/16" 2M "HCR"

Valve none

Kill Line Manifold

Manifold Line

Ground level

Line 6" 1000 W.P.

Spool 20" 2M x 20" 2M x 7-1/16" 2M outlets W.P.

Wellhead 20" 2M x 20" SOW flange

B.O.P.  
\_\_\_ Manual  
\_X\_ Hydraulic  
\_\_\_ Sour Trim

**CONFIDENTIAL**

# **PRESSURE CONTROL SYSTEM SCHEMATIC**

Prepared by:  
EXACT Engineering, Inc  
Tulsa, OK (918) 599-9400

Operator:

Wolverine Gas & Oil Co. of Utah, LLC

Well name and number

Wolverine Federal Arapien Valley 24-1

**5M BOP Stack** — to be utilized while drilling holes for protective and production casings thru lower Arapien, Twin Creek & Navajo intervals

Max. anticipated surface pressure 3000 psi

Annular B.O.P. 13-5/8" — 5M WP

B.O.P.

Manual

X Hydraulic

Sour Trim

B.O.P. 5" pipe Rams 13-5/8" — 5M W.P.  
(Pipe/Blind)

B.O.P. blind Rams 13-5/8" — 5M W.P.  
(Pipe/Blind)

Check Valve 2-1/16" 5M WP

Valve 2-1/16" 5M WP

Valve 2-1/16" 5M WP

Valve 3-1/16" 5M WP

Valve 3-1/16" 5M WP

Kill Line Manifold

Manifold Line

Line 3-1/16" 5M WP

Ground level

Spool 13-5/8" 5M x 13-5/8" 5M x 2-1/16" x 3-1/16" 5M outlets

Wellhead 13-5/8" 5M x 13-5/8" 5M multibowl  
w/ 13-5/8" 5M x 13-3/8" 5M SOW csg head

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## SURFACE USE PLAN

### CONDITIONS OF APPROVAL

#### *Attachment for Permit to Drill*

**Name of Operator:** Wolverine Gas & Oil Company of Utah, LLC  
**Address:** 55 Campau NW  
Grand Rapids, Michigan, 49503-2616  
**Well Location:** **Wolverine Federal Arapien Valley 24-1**

*Surface Location:* 2,358' FNL, 696' FWL, SW/4 NW/4,  
*Target Location:* 792' FNL, 1,868' FWL, NE/4 NW/4,  
Section 24, T20S, R1E, SLB&M, Sanpete County, Utah

Federal and fee (Gunnison Stake of the Church of Jesus Christ of Latter Day Saints) surface use is necessary prior to initiating construction on the respective portions of the Federal or fee lands.

The dirt contractor will be provided with an approved copy of the surface use plan of operations and fee surface use agreement before initiating construction.

A Federal onsite inspection was conducted on 7-16-05 with the following individuals present:

Charlie Irons – Western Land  
Darin Robinson P.E. – Jones and DeMill  
Michael Jackson – BLM Geologist  
Gary Hall – BLM Asst. Field Manager  
Brant Hallows – BLM Soils and Watershed  
Reggie Swenson – BLM Minerals Technician  
Don Hamilton - Buys & Associates, Inc.

1. Existing Roads:

- a. The proposed well site is located approximately 4.79 miles southwest of Mayfield, Utah.
- b. Directions to the proposed well site from Mayfield have been included on the location map at the end of Exhibit C.
- c. The use of roads under State and County Road Department maintenance are necessary to access the proposed well. However, an encroachment permit is not anticipated since no upgrades to the State or County Road system are proposed at this time.
- d. All existing roads will be maintained and kept in good repair during all phases of operation.
- e. Vehicle operators will obey posted speed restrictions and observe safe speeds commensurate with road and weather conditions.
- f. Improvements are planned for the federal and fee portions of the existing access road from the existing county maintained surface to the proposed wellsite. These improvements have been detailed within the road design plans that are being submitted for approval to the BLM. No disturbance to federal surface will occur until approval to upgrade the portions of existing road is in place.

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- g. An off-lease federal Right-of-Way is not anticipated for the access road corridor since it is located entirely on-lease.

2. Planned Access Roads:

- a. From the existing county maintained gravel surfaced Willow Creek Road an access is proposed trending west then north across federal and fee surface approximately 13,730' (2.60) miles to the proposed well site. The federal portion is approximately 3,540' (0.67 miles) in length and consists of entirely new disturbance. The fee portions of the access consists of new disturbance and two-track upgrade. The proposed access road crosses no significant drainages. A road design plan has been included within this package for the federal portion of the access road.
- b. The proposed access road will consist of a 20' travel surface. The ROW for the proposed road will accommodate cuts and fills where needed, as such, the total ROW width will vary as outlined within the road design plans but does average 52' in width.
- c. Fee (Gunnison Stake of the Church of Jesus Christ of Latter Day Saints) surface use approval is necessary for the road construction on fee land.
- d. An existing ditch/pipeline easement exists across the fee lands in the area of the proposed road. The easement is being avoided at this time through negotiations with the easement holder. The easement holder will be communicated with during construction and extreme caution will be exercised when working near the easement.
- e. A maximum grade of 7% will be maintained throughout the project with cuts and fills required to access the well as detailed in the road design plan.
- f. Turnouts are not anticipated since adequate site distance exists in all directions along the road length.
- g. No culverts or low water crossings are anticipated at this time. Adequate drainage structures will be incorporated into the entire access road.
- h. No surfacing material will come from SITLA or Federal lands.
- i. One cattleguard/gate combination is anticipated at this time and will be located at the existing fence crossing near the federal fee property boundary. A gate will be required within the fee surface use agreement as the proposed access road leaves the Willow Creek County Road and enters fee lands at the existing fence.
- j. Surface disturbance and vehicular travel will be limited to the approved location access road.
- k. All access roads and surface disturbing activities will conform to the standards outlined in the Bureau of Land Management and Forest Service publication: Surface Operating Standards for Oil and Gas Exploration and Development. (1989).
- l. The operator will be responsible for all maintenance of the access road including drainage structures.

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3. Location of Existing Wells:

- a. No existing wells are known within a one mile radius of the proposed well.

4. Location of Production Facilities:

- a. The permanent production facility will be designed once the well is drilled and tested to determine if it is primarily oil or gas, and able to produce in paying quantities. We anticipate an oil reservoir, so our initial test facility will include a heater-treater and storage tanks for crude oil and produced water. A conceptual layout of a test facility is presented within Exhibit "D". Once the well has been tested, additional facilities may be needed.
- b. All permanent structures will be painted a flat, non-reflective Juniper Green to match the standard environmental colors. All facilities will be painted within six months of installation. Facilities required to comply with the Occupational Safety and Health Act (OSHA) may be excluded.
- c. A gas meter run will be constructed and located on lease within 500 feet of the wellhead. Meter runs will be housed and/or fenced. All gas production and measurement shall comply with the provisions of 43 CFR 3162.7-3, Onshore Oil and Gas Order No. 5, and American Gas Association (AGA) Report No. 3.
- d. A tank battery will be constructed on this location; it will be surrounded by a dike of sufficient capacity to contain the storage capacity of the largest tank. All liquid hydrocarbons production and measurement shall conform to the provisions of 43 CFR 3162.7-3 and Onshore Oil and Gas Order No. 4.
- e. Any necessary pits will be properly fenced to prevent any wildlife and livestock entry.
- f. All access roads will be maintained as necessary to prevent erosion and accommodate year-round traffic. The road will be maintained in a safe useable condition.
- g. The site will require periodic maintenance to ensure that drainages are kept open and free of debris, ice, and snow, and that surfaces are properly treated to reduce erosion, fugitive dust, and impacts to adjacent areas.
- h. A pipeline is not being applied for with this application but may be necessary in the future when it will be applied for.

5. Location and Type of Water Supply:

- a. Wolverine intends to purchase water from the City of Salina. Jim Casto with the City of Salina has agreed to provide the water needed which will be municipal (culinary) water and tapped at the hydrant located just north of Pioneer Cemetery. The water will be acquired through a direct purchase agreement with Salina City based on quantity.
- b. No water well is proposed with this application.
- c. Should additional water sources be pursued they will be properly permitted through the State of Utah – Division of Water Rights. Additionally, the BLM will be notified of any changes in water supply.

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6. Source of Construction Material:

- a. The use of materials on the project will conform to 43 CFR 3610.2-3.
- b. No construction materials will be removed from Federal or SITLA lands.
- c. If any gravel is used, it will be obtained from a state approved gravel pit.

7. Methods of Handling Waste Disposal:

- a. All wastes associated with this application will be contained and disposed of utilizing approved facilities.
- b. Drill cuttings will be contained and buried on site.
- c. The reserve pit will be located inboard of the location and near the north corner of the pad.
- d. The reserve pit will be constructed so as not to leak, break, or allow any discharge.
- e. The reserve pit will be lined with 12 mil minimum thickness plastic nylon reinforced liner material. The liner will overlay a felt liner pad only if rock is encountered during excavation. The pit liner will overlap the pit walls and be covered with dirt and/or rocks to hold it in place. No trash, scrap pipe, etc., that could puncture the liner will be disposed of in the pit. Pit walls will be sloped no greater than 2:1. A minimum 2-foot freeboard will be maintained in the pit at all times during the drilling and completion operation.
- f. The reserve pit has been located in cut material. Three sides of the reserve pit will be fenced before drilling starts. The fourth side will be fenced as soon as drilling is completed, and shall remain until the pit is dry. After the reserve pit has dried, all areas not needed for production will be rehabilitated.
- g. No chemicals subject to reporting under SARA Title III (hazardous materials) in an amount greater than 10,000 pounds will be used, produced, stored, transported, or disposed of annually in association with the drilling, testing, or completion of the well. Furthermore, no extremely hazardous substances, as defined in 40 CFR 355, in threshold planning quantities, will be used, produced, stored, transported, or disposed of in association with the drilling, testing, or completion of the well.
- h. Trash will be contained in a trash cage and hauled away to an approved disposal site as necessary but no later than at the completion of drilling operations. The contents of the trash container will be hauled off periodically to an approved landfill.
- i. Produced fluids from the well will be produced into a test tank until such time as construction of production facilities is completed. Any spills of oil, gas, salt water or other produced fluids will be cleaned up and removed.
- j. After initial clean-up, a 400 bbl tank will be installed to contain produced waste water. This water will be transported from the tank to an approved disposal well for disposal.
- k. Any salts and/or chemicals, which are an integral part of the drilling system, will be disposed of in the same manner as the drilling fluid.
- l. Sanitary facilities will be on site at all times during operations. Sewage will be placed in a

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portable chemical toilet and the toilet replaced periodically utilizing a licensed contractor to transport by truck the portable chemical toilet so that its contents can be delivered to the Richfield Wastewater Treatment Facility in accordance with state and county regulations.

8. Ancillary Facilities:

- a. Garbage Containers and Portable Toilets are the only ancillary facilities proposed in this application.

9. Well Site Layout: (See Exhibit B)

- a. The well will be properly identified in accordance with state regulations.
- b. Access to the well pad will be from the southwest.
- c. The pad and road designs are consistent with BLM specifications.
- d. A pre-construction meeting with responsible company representative, contractors, and the BLM will be conducted at the project site prior to commencement of surface-disturbing activities. The pad and road will be construction-staked prior to this meeting.
- e. The pad has been staked at its maximum size; however it will be constructed smaller if possible, depending upon rig availability. Should the layout change, this application will be amended and approved utilizing a sundry notice.
- f. All surface disturbing activities will be supervised by a qualified, responsible company representative who is aware of the terms and conditions of the APD and specifications in the approved plans.
- g. All cut and fill slopes will be such that stability can be maintained for the life of the activity.
- h. Diversion ditches will be constructed as shown around the well site and described during the onsite to prevent surface waters from entering the well site area.
- i. The site surface will be graded to drain away from the pit to avoid pit spillage during large storm events.
- j. The stockpiled topsoil (first 6 inches or maximum available) will be stored in a windrow on the uphill side of the location to prevent any possible contamination. All topsoil will be stockpiled for reclamation in such a way as to prevent soil loss and contamination.
- k. Pits will remain fenced until site cleanup.
- l. The blooie line will be located at least 100 feet from the well head.
- m. Water injection may be implemented if necessary to minimize the amount of fugitive dust.

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10. Plans for Restoration of the Surface:

- a. Site reclamation for a producing well will be accomplished for portions of the site not required for the continued operation of the well.
- b. The Operator will control noxious weeds along access road use authorizations, well sites, or other applicable facilities by spraying or mechanical removal. A list of noxious weeds may be obtained from the BLM or the appropriate County Extension Office. On BLM administered land, it is required that a Pesticide Use Proposal be submitted and approved prior to the application of herbicides, pesticides or possibly hazardous chemicals.
- c. Upon well completion, any hydrocarbons in the pit shall be removed in accordance with state regulations. Once the reserve pit is dry, the plastic nylon reinforced liner shall be torn and perforated before backfilling of the reserve pit. The reserve pit and that portion of the location not needed for production facilities/operations will be recontoured to the approximate natural contours.
- d. The cut and fill slopes and all other disturbed areas not needed for the production operation will be top soiled and re-vegetated. The stockpiled topsoil will be evenly distributed over the disturbed area.
- e. Prior to reseeding the site, all disturbed areas, including the access road, will be scarified and left with a rough surface. The site will then be seeded and/or planted as prescribed by the BLM.

11. Surface and Mineral Ownership:

- a. Surface Ownership -- United States of America under the management of the BLM -- Richfield Field Office, 150 East 900 North, Richfield, Utah 84701; 435-896-1500.
- b. Mineral Ownership -- United States of America under the management of the BLM -- Richfield Field Office, 150 East 900 North, Richfield, Utah 84701; 435-896-1500.

12. Other Information:

- a. Mountain States Archaeology, LLC has completed a Class III archeological survey. A copy of the report will be submitted under separate cover to the appropriate agencies by Mountain States Archaeology, LLC.
- b. Additional information:
  - a. No drainage crossings that require additional State or Federal approval are being crossed.
  - b. No raptor nests are known to exist within one mile of the proposed wellsite.
  - c. A paleontological clearance is not required since suitable fossil bearing formations do not exist within the project area.
  - d. A BLM sensitive plant species survey has been completed Buys & Associates, Inc. A copy of the report has been submitted under separate cover to the appropriate agencies by Buys & Associates, Inc.

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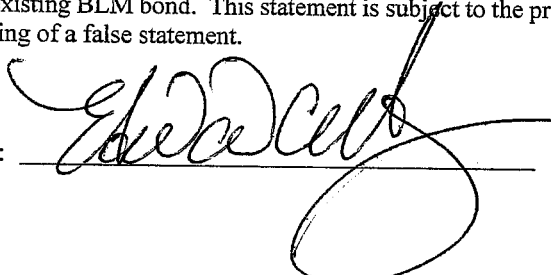
13. Operator's Representative and Certification

<u>Title</u>	<u>Name</u>	<u>Office Phone</u>
Company Representative (Richfield)	Charlie Irons	1-435-896-1943
Company Representative (Grand Rapids)	Ed Higuera	1-616-458-1150
Agent for Wolverine	Don Hamilton	1-435-719-2018

Certification:

I hereby certify that I, or persons under my direct supervision, have inspected the proposed drill site and access route; that I am familiar with the conditions which currently exists; that the statements made in this APD package are, to the best of my knowledge, true and correct; and that the work associated with the operations proposed herein will be performed by Wolverine Gas & Oil Company of Utah, LLC and its contractors and subcontractors in conformity with this APD package and the terms and conditions under which it is approved. I also certify responsibility for the operations conducted on that portion of the leased lands associated with this application, with bond coverage being provided under Wolverine's pending existing BLM bond. This statement is subject to the provisions of 18 U.S.C. 1001 for the filing of a false statement.

Signature: \_\_\_\_\_



Date: \_\_\_\_\_

9-16-05

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# SEE SHEET 1 OF 2

WOLVERINE GAS AND OIL COMPANY OF UTAH, LLC.

LOCATION LAYOUT FOR  
WOLVERINE FEDERAL ARAPIEN VALLEY #24-1  
SECTION 24, T.20 S., R.1 E., S.L.B. & M.

F-11.0'  
EL. 43.5'

5

PAD ELEV. = 5554.50

C-16.5'  
EL. 71.0'

3

C-2.0'  
EL. 56.5'

4

**PAD EARTHWORK VOLUMES**  
Cut = 19,688 yards  
Fill = 18,474 yards (30% Shrink)  
Net = 1214 yards CUT

PIT CAPACITY = 50,310 Bbls (2' FREEBOARD)  
PIT VOLUMES = 13,387 C.Y.

TOTAL PAD AREA: 3.465 ACRES  
POND AREA: 1.019 ACRES

ELEV. UNGRADED GROUND AT FEDERAL  
ARAPIEN VALLEY #24-1 = 5560.00

ELEV. GRADED GROUND AT FEDERAL  
ARAPIEN VALLEY #24-1 = 5554.50



**Jones & DeMille Engineering**  
1535 South 100 West - Richfield, Utah 84701  
Phone (435) 898-8266  
Fax (435) 898-8268  
www.jonesanddemille.com

Well Location Layout for

Wolverine Gas and Oil Company of Utah, LLC.

DESIGNED	SURVEYED	CHECKED	DRAWN	PROJECT NO.	SHEET NO.
DATE	T.G.	D.H.R.	B.L.L.	0506-124	2 OF 2
08/31/2005		Design	1" = 50'		

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LOCATION LAYOUT FOR  
WOLVERINE FEDERAL ARAPIEN VALLEY #24-1  
SECTION 24, T.20 S., R.1 E., S.L.B.& M.

PAD EARTHWORK VOLUMES  
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ARAPIEN VALLEY #24-1 = 5560.00

ELEV. GRADED GROUND AT FEDERAL  
ARAPIEN VALLEY #24-1 = 5554.50

EMERGENCY EGRESS

F-11.0'  
EL. 43.5'

5

FILL

RESERVE PIT SPOIL AREA

DRAINAGE BYPASS DITCH

185.00'

240.00'

RESERVE PIT

PAD ELEV. = 5554.50

SEE SHEET 2 OF 2

390.00'

C-5.5'  
EL. 60.0'

2

CUT

TOPSOIL STOCKPILE AREA

CUT

FLARE PIT

DATA

Sta 14+00

CUT

C-16.5'  
EL. 71.0'



Jones & DeMille Engineering  
1535 South 100 West - Richfield, Utah 84701  
Phone (435) 896-8268  
Fax (435) 896-8268  
www.jonesanddemille.com

Well Location Layout for

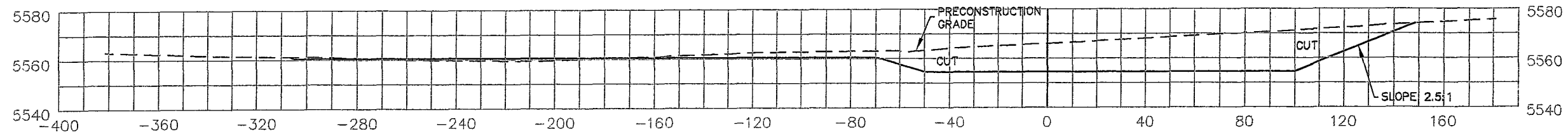
Wolverine Gas and Oil Company of Utah, LLC.

DESIGNED	SURVEYED	CHECKED	DRAWN	PROJECT NO.	SHEET NO.
T.G.	T.G.	D.H.R.	B.L.L.	0506-124	1 OF 2
DATE	DWG. NAME	SCALE			
08/31/2005	Design	1" = 50'			

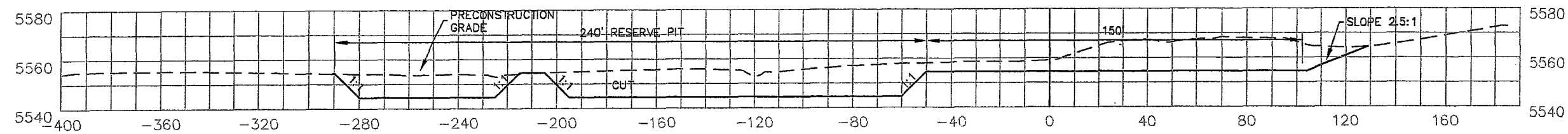
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TYPICAL CROSS SECTIONS FOR  
WOLVERINE FEDERAL ARAPIEN VALLEY #24-1  
SECTION 24, T.20 S., R.1 E., S.L.B. & M.

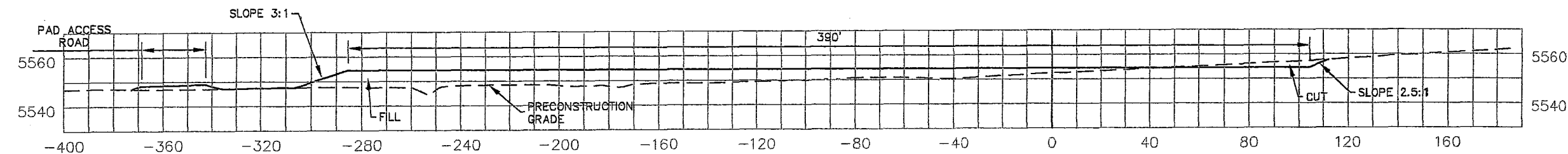
STA 14+00



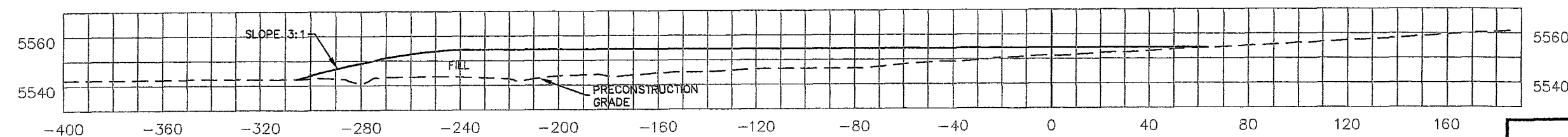
STA 12+50



STA 11+00



STA 10+00



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1535 South 100 West - Richfield, Utah 84701  
Phone (435) 896-8268  
Fax (435) 896-8268  
www.jonesanddemille.com

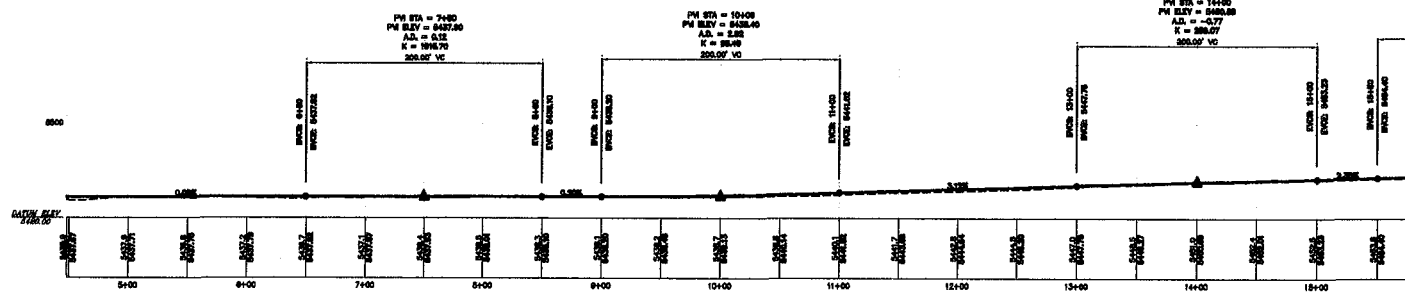
Typical Cross Sections for

Wolverine Gas and Oil Company of Utah, LLC.

DESIGNED	SURVEYED	CHECKED	DRAWN	PROJECT NO.	SHEET NO.
-	T.G.	D.H.R.	B.L.L.	0506-124	1
DATE		DWGNAME	SCALE		
07/22/2005		Design	1"=50'H&V		

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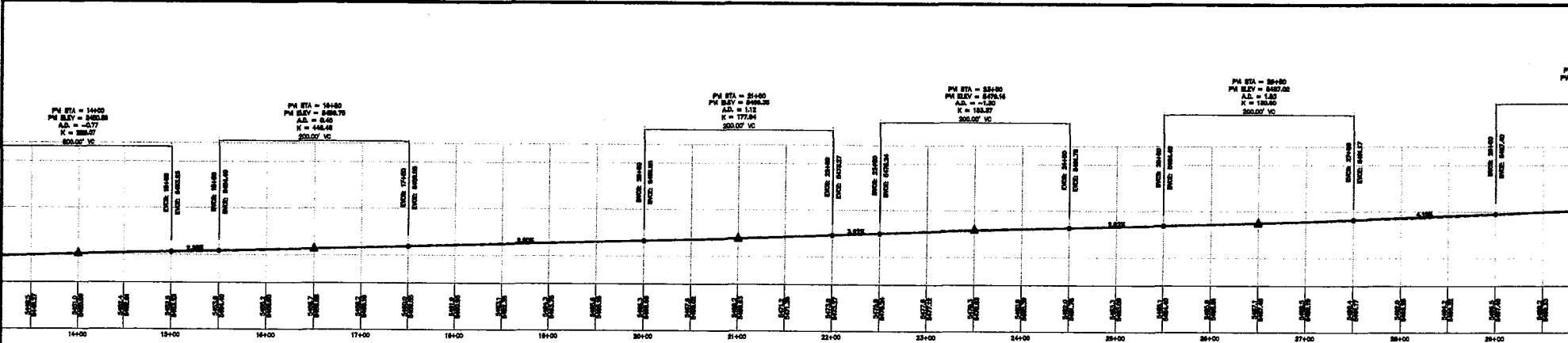
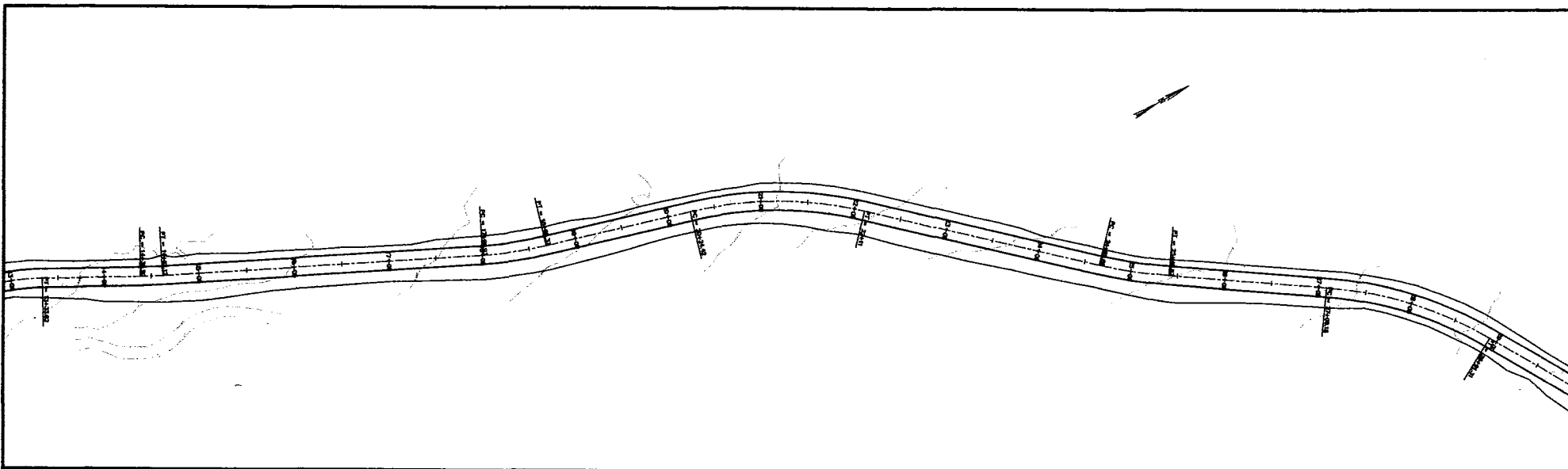
DESIGNED D.H.R.	DRAWN L.G.
CHECKED D.H.R.	PROJECT PROJECT-124
SCALE 1" = 30'	DATE 06/11/2005



Jones & DeMille Engineering  
1000 South 100 West in Provo, Utah 84601  
PHONE (801) 733-1111  
FAX (801) 733-1111  
www.jonesanddemille.com

Wolverine Gas & Oil Co. of Utah, L.L.C.  
Araplen Well Sites Access Road

SHEET NO.  
PP-08



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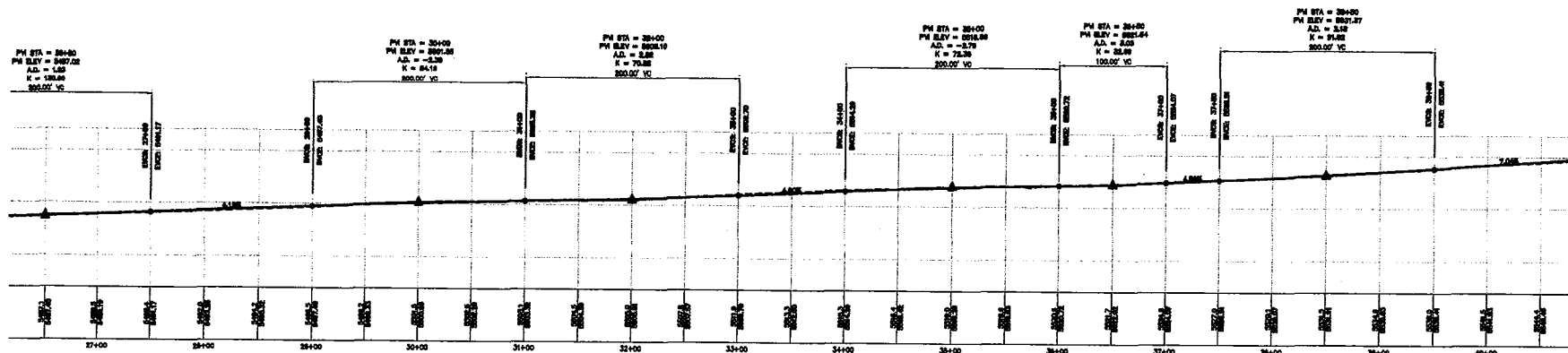
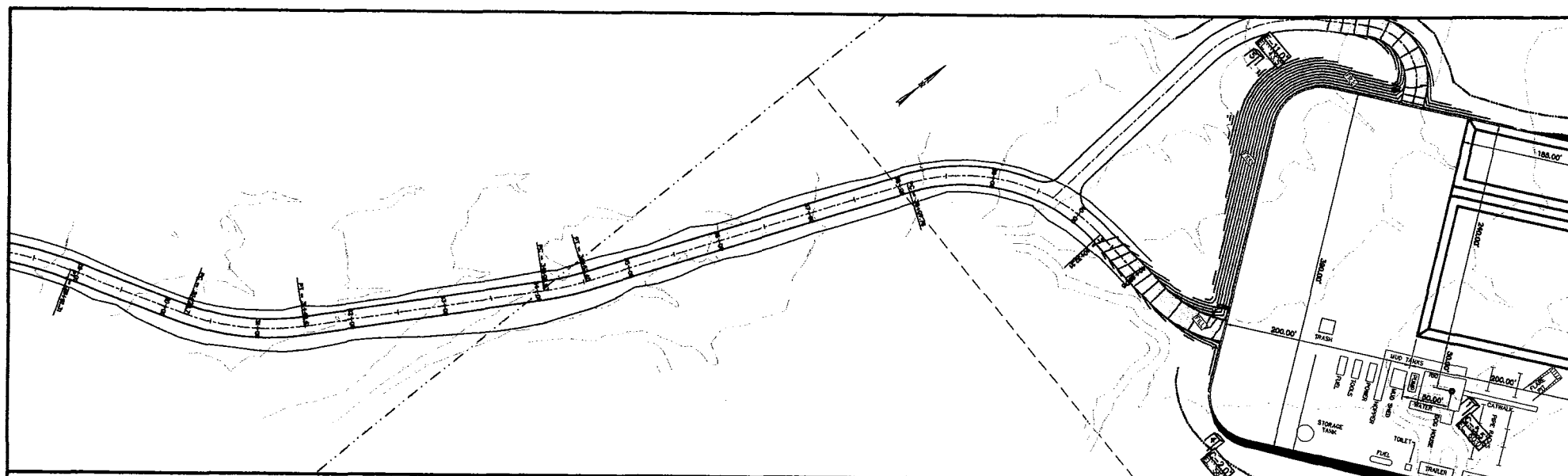
DESIGNED D.H.R.	DRAWN L.G.
CHECKED D.H.R.	PROJECT PROJ 0504-124
SCALE 1" = 50'	DATE 05/11/2005



**Jones & DeMille Engineering**  
1300 South 100 West - Salt Lake City, UT 84101  
Phone (801) 224-1000  
Fax (801) 224-1001  
www.jonesandd.com

**Wolverine Gas & Oil Co. of Utah, L.L.C.**  
**Arapien Well Sites Access Road**

SHEET NO.  
**PP-09**



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DESIGNED D.H.R.	DRAWN L.O.
CHECKED D.H.R.	PROJECT PROJ. 0506-124 DWC/ALC/COM/108/105
SCALE 1" = 50'	DATE 06/11/2005

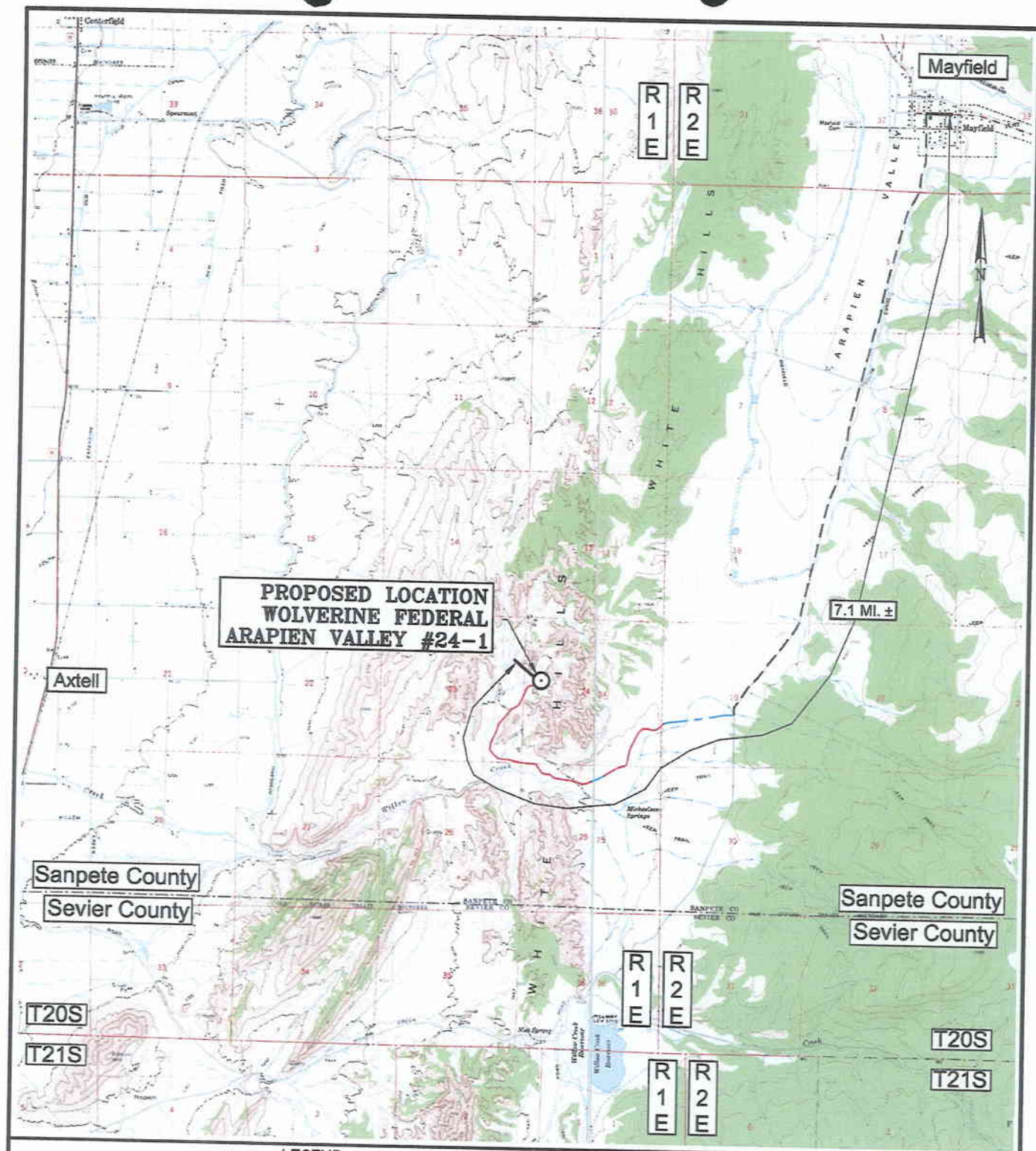


**Jones & DeMille Engineering**  
1828 South 120 West - Salt Lake City, UT 84115  
TEL: (801) 588-8888  
WWW.JONES-DEMILLE.COM

**Wolverine Gas & Oil Co. of Utah, L.L.C.**  
**Araplen Well Sites Access Road**

SHEET NO.  
**PP-10**





**PROPOSED LOCATION  
WOLVERINE FEDERAL  
ARAPIEN VALLEY #24-1**

**Axtell**

**Mayfield**

**Sanpete County**

**Sevier County**

**Sanpete County**

**Sevier County**

**T20S**

**T21S**

**R1E  
R2E**

**R1E  
R2E**

**T20S**

**T21S**

**7.1 MI. ±**

**LEGEND**

- PROPOSED LOCATION
- EXISTING ROADWAY
- NEW ROADWAY
- EXISTING ROAD
- NEEDING UPGRADE

**Wolverine Federal Arapien Valley #24-1  
Section 24, T.20 S., R.1 E., S.L.B. & M.  
2358' FNL 696' FWL**



**Jones & DeMille Engineering**

1535 South 100 West - Richfield, Utah 84701  
(435) 896-8266 Phone  
(435) 896-8268 Fax  
[www.jonesanddemille.com](http://www.jonesanddemille.com)

**Wolverine Gas & Oil Corp.**

**Wolverine Federal Arapien Valley**

**#24-1 Location Map**

SCALE: 1"=5000'

ENG.: D.H.R.

PROJ.#: 0506-124

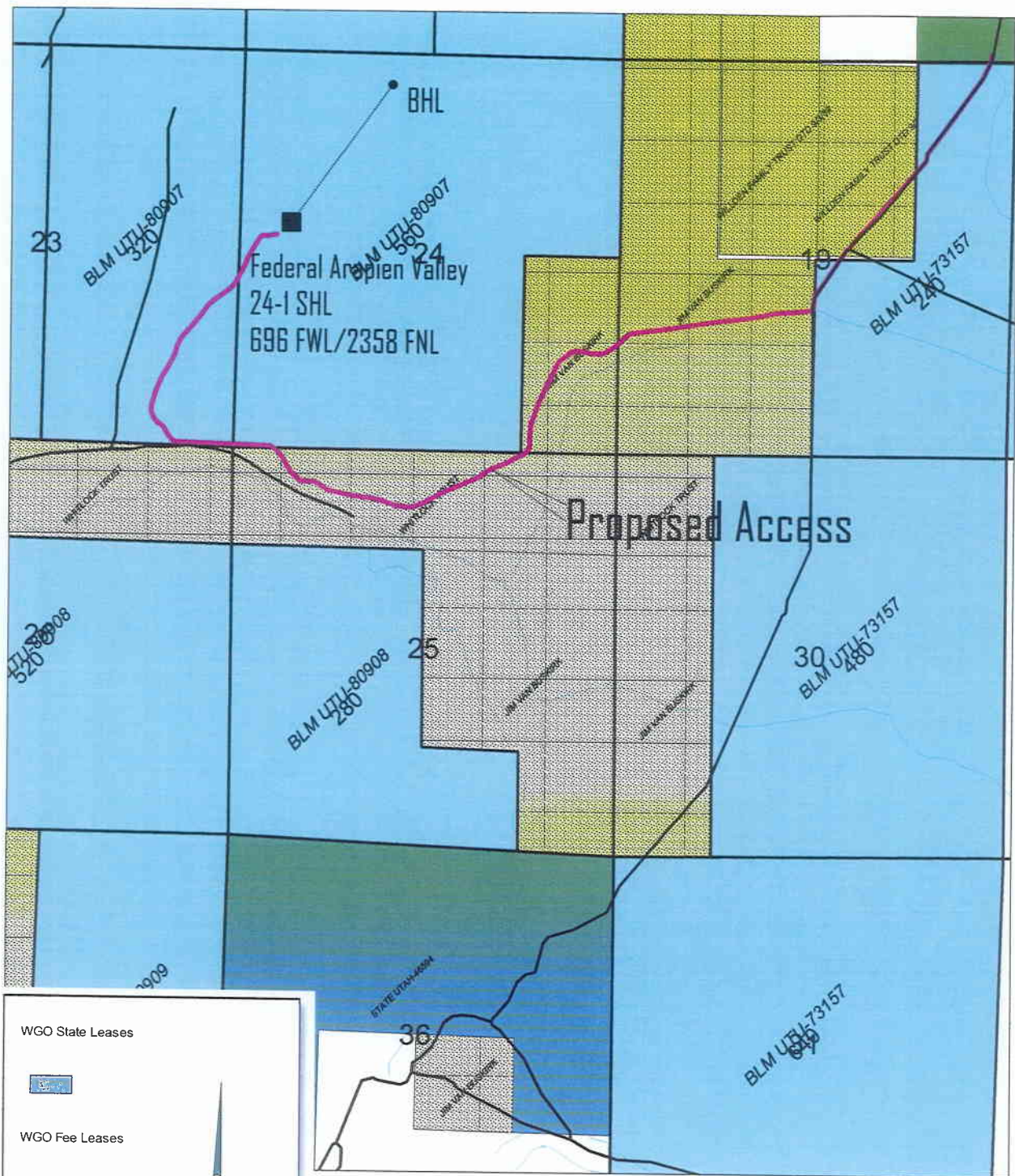
DATE: 07/27/2005

DWG.BY: L.G. T.G.

DWG.NAME: location

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WGO State Leases

WGO Fee Leases

WGO Federal leases

N

1:24000

660 0 660 1320 1980 ft

WOLVERINE

Wolverine Gas & Oil Company of Utah, LLC  
(Operator)  
Energy Exploration in Partnership with the Environment

ONE WOODMONT PLAZA  
55 CAMPBELL, N.W.  
GRAND RAPIDS, MI 49503-2616  
(616) 458-1150

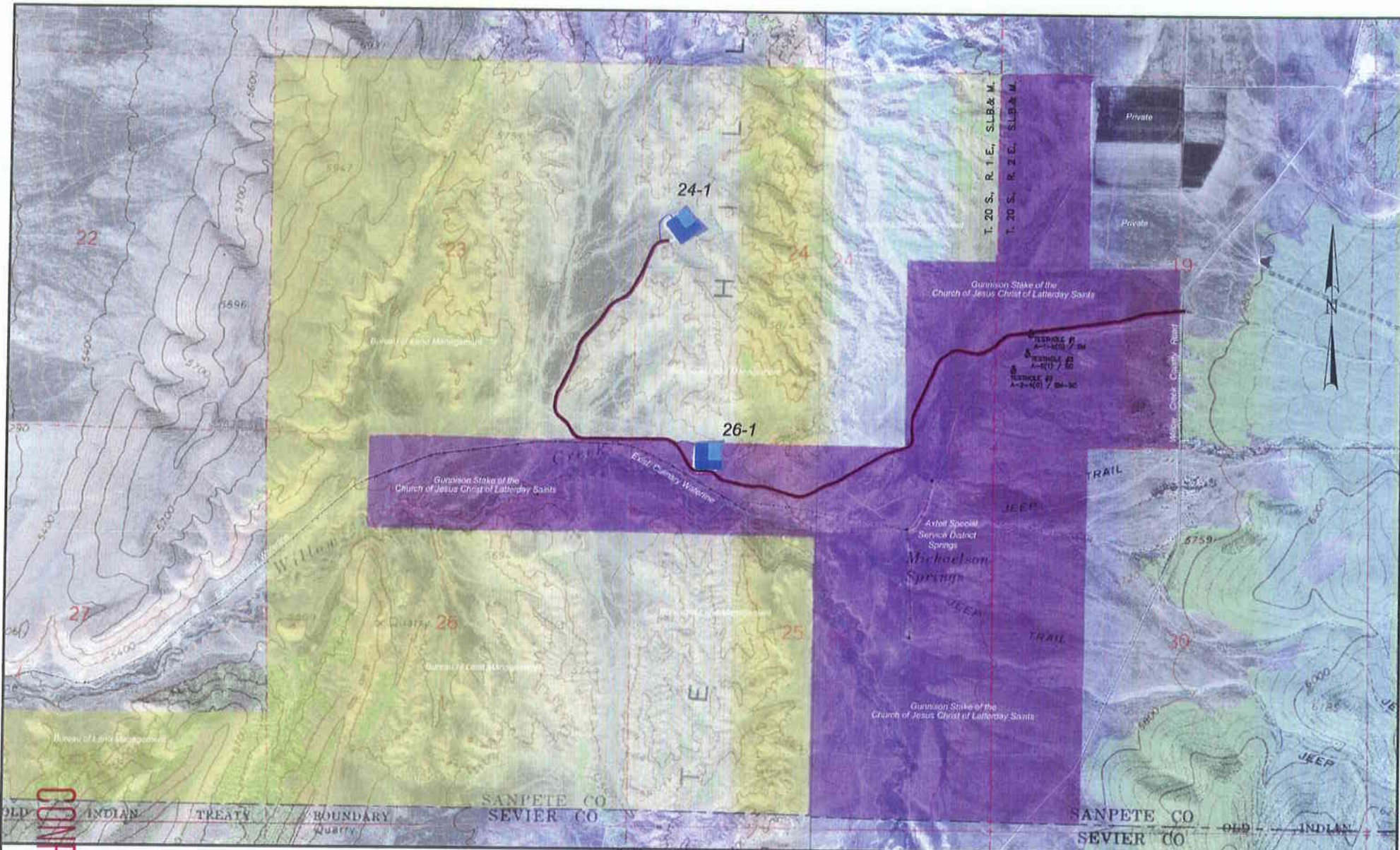
Federal Arapian Valley 24-I Proposed Location  
T208-R1E  
Sampete Co., UT

Map: 11 Supersheet  
2000

Comp: mtl\_rtrntr Canyon, Arapian Valley, UT

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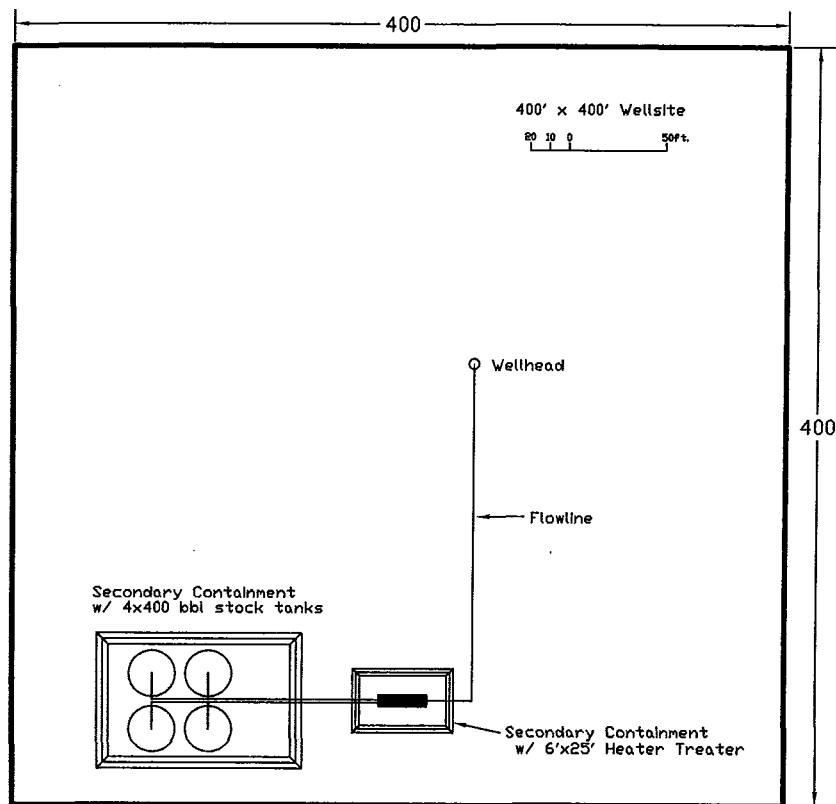





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SANPETE CO SEVIER CO	SANPETE CO SEVIER CO	SANPETE CO SEVIER CO	SANPETE CO SEVIER CO	SANPETE CO SEVIER CO
OLD INDIAN TREATY BOUNDARY QUARRY	OLD INDIAN TREATY BOUNDARY QUARRY	OLD INDIAN TREATY BOUNDARY QUARRY	OLD INDIAN TREATY BOUNDARY QUARRY	OLD INDIAN TREATY BOUNDARY QUARRY
1" = 600'	DATE 08/11/2005	Jones & DeMille Engineering 1528 South 1200 West - P.O. Box 6070 Provo, UT 84602 Phone (435) 599-0300 Fax (435) 599-0303 www.jonesandmille.com	Wolverine Gas & Oil Co. of Utah, L.L.C. Arapton Valley Area Map	SHEET NO. 1 of 1

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	<b>WOLVERINE GAS &amp; OIL CORPORATION</b> <i>Energy Exploration in Partnership with the Environment</i> ONE RIVERFRONT PLAZA 55 CAMP AU, N.W. GRAND RAPIDS, MI 49503-2816 (616) 458-1150
	<b>General Test Facility Layout</b>
Date: 16 September, 2005	Data Source: Facility template

**WORKSHEET**  
**APPLICATION FOR PERMIT TO DRILL**

APD RECEIVED: 10/27/2005

API NO. ASSIGNED: 43-039-30030

WELL NAME: WOLV FED ARAPIEN VLY 24-1

OPERATOR: WOLVERINE GAS & OIL CO ( N1655 )

CONTACT: EDWARD HIGUERA

PHONE NUMBER: 616-458-1150

**PROPOSED LOCATION:**

SWNW 24 200S 010E

SURFACE: 2358 FNL 0696 FWL

**NEW** BOTTOM: 0792 FNL 1868 FWL

SANPETE

WILDCAT ( 1 )

LEASE TYPE: 1 - Federal

LEASE NUMBER: UTU-80907

SURFACE OWNER: 1 - Federal

PROPOSED FORMATION: NAVA

COALBED METHANE WELL? NO

INSPECT LOCATN BY: / /

Tech Review	Initials	Date
Engineering		
Geology		
Surface		

LATITUDE: 39.05577

LONGITUDE: -111.7570

**RECEIVED AND/OR REVIEWED:**

☒ Plat  
☒ Bond: Fed[1] Ind[] Sta[] Fee[]  
(No. WY3329 )  
☒ Potash (Y/N)  
☒ Oil Shale 190-5 (B) or 190-3 or 190-13  
☒ Water Permit  
(No. MUNICIPAL )  
☒ RDCC Review (Y/N)  
(Date: )  
☒ Fee Surf Agreement (Y/N)  
☒ Intent to Commingle (Y/N)

**LOCATION AND SITING:**

☐ R649-2-3.  
Unit WOLVERINE  
☐ R649-3-2. General  
Siting: 460 From Qtr/Qtr & 920' Between Wells  
☐ R649-3-3. Exception  
☐ Drilling Unit  
Board Cause No: \_\_\_\_\_  
Eff Date: \_\_\_\_\_  
Siting: \_\_\_\_\_  
☒ R649-3-11. Directional Drill

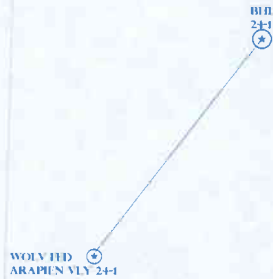
**COMMENTS:**

**STIPULATIONS:**

1- Federal Approval  
2- Spacing Strip

T20S R1E

T20S R2E



24

19

## WOLVERINE UNIT

OPERATOR: WOLVERINE G&O CO (N1655)

SEC: 24 T. 20S R. 1E

FIELD: WILDCAT (001)

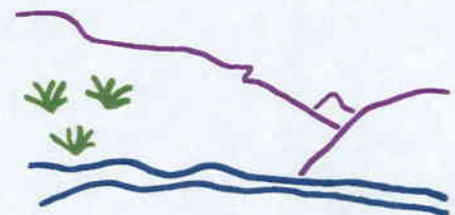
COUNTY: SANPETE

SPACING: R649-3-11 / DIRECTIONAL DRILLING

**Field Status**  
 ABANDONED  
 ACTIVE  
 COMBINED  
 INACTIVE  
 PROPOSED  
 STORAGE  
 TERMINATED

**Unit Status**  
 EXPLORATORY  
 GAS STORAGE  
 NF PP OIL  
 NF SECONDARY  
 PENDING  
 PI OIL  
 PP GAS  
 PP GEOTHERML  
 PP OIL  
 SECONDARY  
 TERMINATED

**Wells Status**  
 GAS INJECTION  
 GAS STORAGE  
 LOCATION ABANDONED  
 NEW LOCATION  
 PLUGGED & ABANDONED  
 PRODUCING GAS  
 PRODUCING OIL  
 SHUT-IN GAS  
 SHUT-IN OIL  
 TEMP. ABANDONED  
 TEST WELL  
 WATER INJECTION  
 WATER SUPPLY  
 WATER DISPOSAL  
 DRILLING



Utah Oil Gas and Mining



PREPARED BY: DIANA WHITNEY  
 DATE: 29-OCTOBER-2005



# United States Department of the Interior

## BUREAU OF LAND MANAGEMENT

Utah State Office  
P.O. Box 45155  
Salt Lake City, Utah 84145-0155

IN REPLY REFER TO:  
3160  
(UT-922)

October 28, 2005

### Memorandum

To: Field Office Manger, Richfield Field Office

From: Michael Coulthard, Petroleum Engineer

Subject: 2005 Plan of Development Wolverine Unit Sanpete and  
Sevier County, Utah.

Pursuant to email between Diana Whitney, Division of Oil, Gas and Mining, and Mickey Coulthard, Utah State Office, Bureau of Land Management, the following well has a modified bottom hole location. The well is planned for calendar year 2005 within the Wolverine Unit, Sanpete County, Utah and was previously covered by the plan of development approved August 8, 2005.

API #	WELL NAME	LOCATION
(Proposed PZ Navajo)		
43-039-30030	Arapien Valley 24-1 Sec 24 T20S R01E 2358 FNL 0696 FWL	
BHL	Sec 24 T20S R01E 0792 FNL 1868 FWL	

This office has no objection to permitting the well at this time.

/s/ Michael L. Coulthard

bcc: File – Wolverine Unit  
Division of Oil Gas and Mining  
Central Files  
Agr. Sec. Chron  
Fluid Chron



**State of Utah**

**Department of  
Natural Resources**

MICHAEL R. STYLER  
*Executive Director*

**Division of  
Oil, Gas & Mining**

JOHN R. BAZA  
*Division Director*

JON M. HUNTSMAN, JR.  
*Governor*

GARY R. HERBERT  
*Lieutenant Governor*

November 3, 2005

Wolverine Gas & Oil Company of Utah, LLC  
55 Campau, NW  
Grand Rapids, MI 49503-2616

Re: Wolverine Federal Arapien Valley 24-1 Well, Surface Location 2358' FNL,  
696' FWL, SW NW, Sec. 24, T. 20 South, R. 1 East, Bottom Location  
792' FNL, 1868' FWL, NE NW, Sec. 24, T. 20 South, R. 1 East,  
Sanpete County, Utah

Gentlemen:

Pursuant to the provisions and requirements of Utah Code Ann. § 40-6-1 *et seq.*, Utah Administrative Code R649-3-1 *et seq.*, and the attached Conditions of Approval, approval to drill the referenced well is granted.

This approval shall expire one year from the above date unless substantial and continuous operation is underway, or a request for extension is made prior to the expiration date. The API identification number assigned to this well is 43-039-30030.

Sincerely,

Gil Hunt  
Associate Director

pab  
Enclosures

cc: Sanpete County Assessor  
Bureau of Land Management, Richfield District Office

Operator: Wolverine Gas & Oil Company of Utah, LLC  
Well Name & Number Wolverine Federal Arapien Valley 24-1  
API Number: 43-039-30030  
Lease: UTU-80907

Surface Location: SW NW Sec. 24 T. 20 South R. 1 East  
Bottom Location: NW NW Sec. 24 T. 20 South R. 1 East

### Conditions of Approval

1. General

Compliance with the requirements of Utah Admin. R. 649-1 *et seq.*, the Oil and Gas Conservation General Rules, and the applicable terms and provisions of the approved Application for permit to drill.

2. Notification Requirements

Notify the Division within 24 hours of spudding the well.

- Contact Carol Daniels at (801) 538-5284.

Notify the Division prior to commencing operations to plug and abandon the well.

- Contact Dan Jarvis at (801) 538-5338

3. Reporting Requirements

All required reports, forms and submittals will be promptly filed with the Division, including but not limited to the Entity Action Form (Form 6), Report of Water Encountered During Drilling (Form 7), Weekly Progress Reports for drilling and completion operations, and Sundry Notices and Reports on Wells requesting approval of change of plans or other operational actions.

4. State approval of this well does not supersede the required federal approval, which must be obtained prior to drilling.

5. In accordance with Utah Admin. R.649-3-11, Directional Drilling, the operator shall submit a complete angular deviation and directional survey report to the Division within 30 days following completion of the well.



6. This proposed well is located in an area for which drilling units (well spacing patterns) have not been established through an order of the Board of Oil, Gas and Mining (the "Board"). In order to avoid the possibility of waste or injury to correlative rights, the operator is requested, once the well has been drilled, completed, and has produced, to analyze geological and engineering data generated therefrom, as well as any similar data from surrounding areas if available. As soon as is practicable after completion of its analysis, and if the analysis suggests an area larger than the quarter-quarter section upon which the well is located is being drained, the operator is requested to seek an appropriate order from the Board establishing drilling and spacing units in conformance with such analysis by filing a Request for Agency Action with the Board.



**WOLVERINE GAS AND OIL COMPANY**  
of Utah, LLC

*Energy Exploration in Partnership with the Environment*

May 1, 2006

Fluid Mineral Group  
Bureau of Land Management  
Richfield Field Office  
150 East 900 North  
Richfield, Utah 84701

Re: Wolverine Federal Arapien Valley 24-1,  
2331' FNL, 549' FWL, (SW/4 NW/4),  
Section 24, T. 20 South, R. 1 East, SLB&M,  
Sanpete County, Utah

**RECEIVED**

**MAY 08 2006**

**DIV. OF OIL, GAS & MINING**

Dear Fluid Minerals Group:

Wolverine Gas and Oil Company of Utah, LLC (Wolverine) respectfully submits the enclosed Sundry Notice and attachments in triplicate requesting changes to the approved drilling plan for the referenced well. The approved plan called for drilling a directional well to a total depth of 11,500 feet. We now request approval to drill a vertical well to a depth of 16,200 feet. An H<sub>2</sub>S Contingency Plan is included with this Sundry Notice because the targeted Kaibab Formation has potential to contain Hydrogen Sulfide gas.

The subject well will be drilled at a repositioned spot on a modified drilling pad. Alterations to the drilling pad are needed to accommodate a larger drilling rig and in consideration of wind direction and H<sub>2</sub>S potential. The revised drilling pad will disturb less area than the originally approved pad because it is designed to initially accommodate a single well rather multiple wells.


Please accept this letter as Wolverine's written request for continued confidential treatment of all information included in this and previous correspondence relating to this well.

Thank you for your consideration of this request. Please feel free to contact me or Ellis Peterson of this office at 616-458-1150 if you have any questions or need additional information.

Sincerely,

  
Edward Higuera, Manager - Development

**CONFIDENTIAL**

cc:  Utah Division of Oil, Gas and Mining  
Dawn Martin, Buys & Associates, Inc.  
Don Hamilton, Buys & Associates, Inc.

**COPY**

UNITED STATES  
DEPARTMENT OF THE INTERIOR  
BUREAU OF LAND MANAGEMENT

CONFIDENTIAL

FORM APPROVED  
OMB No. 1004-0137  
Expires: March 31, 2007

## SUNDRY NOTICES AND REPORTS ON WELLS

Do not use this form for proposals to drill or to re-enter an abandoned well. Use Form 3160-3 (APD) for such proposals.

## SUBMIT IN TRIPLICATE- Other instructions on reverse side.

1. Type of Well  
☒ Oil Well ☐ Gas Well ☐ Other2. Name of Operator **Wolverine Gas and Oil Company of Utah, LLC**3a. Address  
**55 Campau NW, Grand Rapids, Michigan 49503-2616**3b. Phone No. (include area code)  
**616-458-1150**4. Location of Well (Footage, Sec., T., R., M., or Survey Description)  
**2331' FNL, 549' FWL (SW/4 NW/4), Section 24, T20S, R1E, SLB&M**  
**434455X 4323038Y**  
**39.655841 -111.757516**5. Lease Serial No.  
**UTU-80907**6. If Indian, Allottee or Tribe Name  
**NA**7. If Unit or CA/Agreement, Name and/or No.  
**Wolverine Federal Unit**8. Well Name and No.  
**Wolverine Fed. Arapien Valley 24-1**9. API Well No.  
**43-039-30030**10. Field and Pool, or Exploratory Area  
**Wildcat**11. County or Parish, State  
**Sanpete County, Utah**

## 12. CHECK APPROPRIATE BOX(ES) TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA

TYPE OF SUBMISSION	TYPE OF ACTION			
<input checked="" type="checkbox"/> Notice of Intent	<input type="checkbox"/> Acidize	<input type="checkbox"/> Deepen	<input type="checkbox"/> Production (Start/Resume)	<input type="checkbox"/> Water Shut-Off
<input type="checkbox"/> Subsequent Report	<input type="checkbox"/> Alter Casing	<input type="checkbox"/> Fracture Treat	<input type="checkbox"/> Reclamation	<input type="checkbox"/> Well Integrity
<input type="checkbox"/> Final Abandonment Notice	<input type="checkbox"/> Casing Repair	<input type="checkbox"/> New Construction	<input type="checkbox"/> Recomplete	<input type="checkbox"/> Other
	<input checked="" type="checkbox"/> Change Plans	<input type="checkbox"/> Plug and Abandon	<input type="checkbox"/> Temporarily Abandon	
	<input type="checkbox"/> Convert to Injection	<input type="checkbox"/> Plug Back	<input type="checkbox"/> Water Disposal	

13. Describe Proposed or Completed Operation (clearly state all pertinent details, including estimated starting date of any proposed work and approximate duration thereof. If the proposal is to deepen directionally or recomple horizontally, give subsurface locations and measured and true vertical depths of all pertinent markers and zones. Attach the Bond under which the work will be performed or provide the Bond No. on file with BLM/BIA. Required subsequent reports shall be filed within 30 days following completion of the involved operations. If the operation results in a multiple completion or recomple in a new interval, a Form 3160-4 shall be filed once testing has been completed. Final Abandonment Notices shall be filed only after all requirements, including reclamation, have been completed, and the operator has determined that the site is ready for final inspection.)

The original APD for this well was approved for drilling a directional hole to a total depth of 11,500'. Wolverine Oil and Gas Company of Utah, LLC now plans to drill a vertical well to a proposed depth of 16,200'. The planned drilling pad layout and well spot on the pad were changed, but the access and drilling pad location remain as approved. The drilling plan was modified to accomodate changed casing, cementing, pressure control, and H2S contingency requirements. Proposed changes to the approved APD are tabulated on the attached document.

Attachments: Survey Plat, Changes to Original Drilling Plan, Drilling Pad Layout plat, BOP Schematic, H2S Contingency Plan

RECEIVED

MAY 08 2006

DIV. OF OIL, GAS &amp; MINING

Approved by the  
Utah Division of  
Oil, Gas and MiningDate: 05-16-06  
By: [Signature]Federal Approval of this  
Action is Necessary14. I hereby certify that the foregoing is true and correct.  
Name (Printed/Typed)

Edward Higuera

Title: Manager - Development

Signature

Date

05/01/2006

## THIS SPACE FOR FEDERAL OR STATE OFFICE USE

Approved by

Conditions of approval, if any, are attached. Approval of this notice does not warrant or certify that the applicant holds legal or equitable title to those rights in the subject lease which would entitle the applicant to conduct operations thereon.

Title

Office

COPY SENT TO OPERATOR

Date: 5/26/06

Initials: [Signature]




Title 18 U.S.C. Section 1001 and Title 43 U.S.C. Section 1212, make it a crime for any person knowingly and willfully to make to any department or agency of the United States any false, fictitious or fraudulent statements or representations as to any matter within its jurisdiction.

(Instructions on page 2)

**COPY**

Wolverine Gas & Oil Company of Utah, L.L.C.

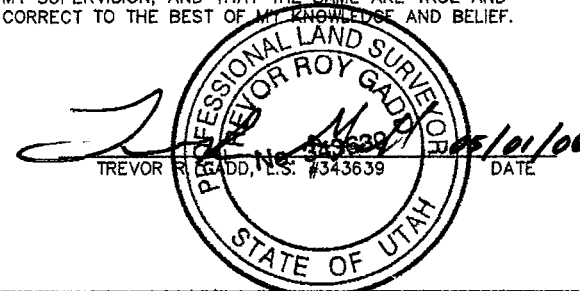
### LEGEND

-  = SECTION CORNERS LOCATED  
 = QUARTER SECTION CORNERS LOCATED  
 = PROPOSED WELL HEAD

BASIS OF ELEVATION

A horizontal scale bar with alternating black and white segments. Above the bar, the numbers 1000', 500', and 0 are marked. Below the bar, the text 'SCALE' is centered.

THIS IS TO CERTIFY THAT THIS PLAT WAS PREPARED FROM  
FIELD NOTES OF ACTUAL SURVEYS MADE BY ME OR UNDER  
MY SUPERVISION, AND THAT THE SAME ARE TRUE AND  
CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF.

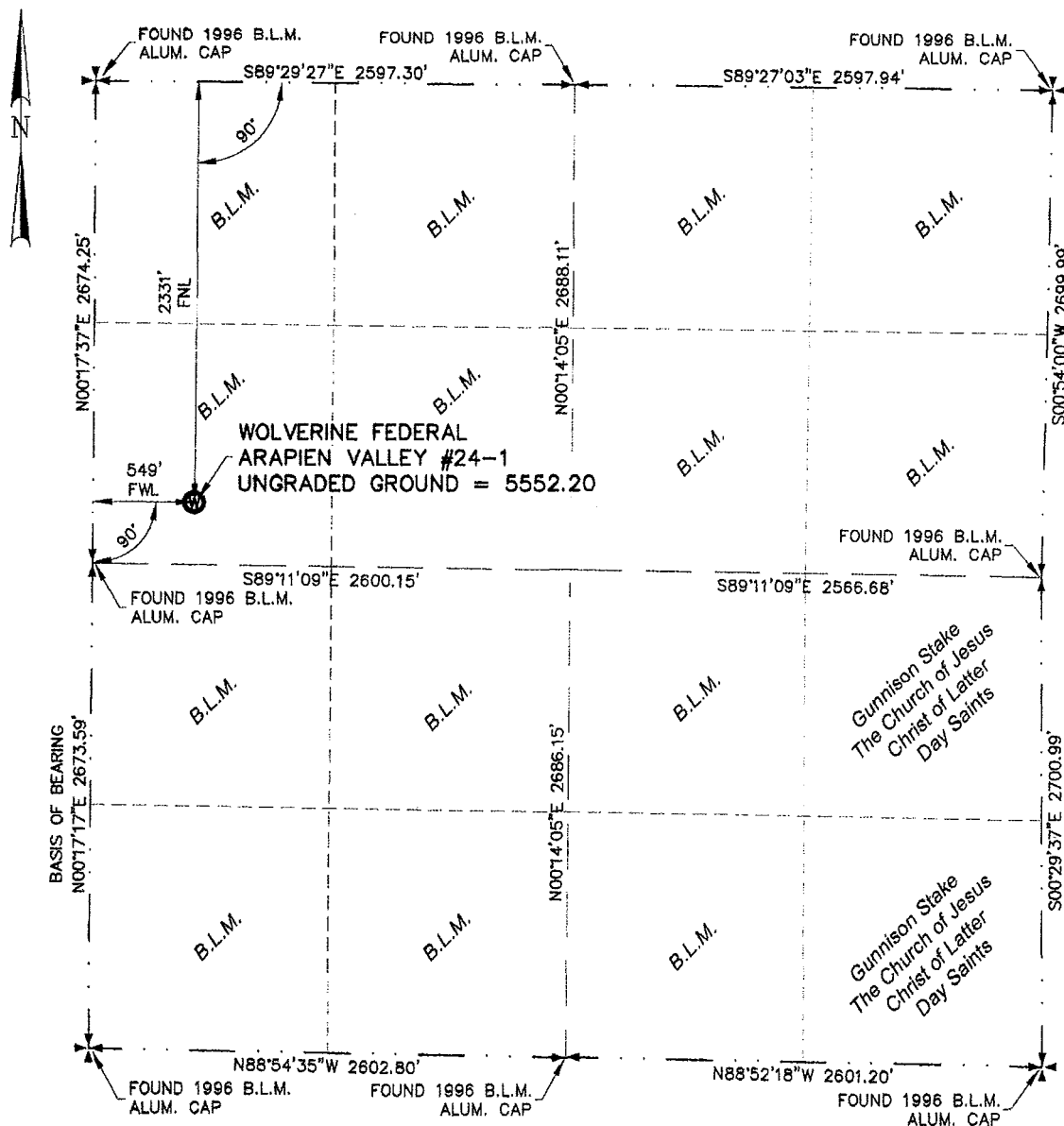


**Jones & DeMille Engineering**  
1535 South 160 West - Richfield, Utah 84701  
Phone (435) 896-8266  
Fax (435) 896-8268  
[www.jonesanddemille.com](http://www.jonesanddemille.com)

Well Location Plat for

**Wolverine Gas & Oil Company of Utah, L.L.C.**

DESIGNED —	SURVEYED T.W.G.	CHECKED T.R.G.	DRAWN T.R.G.	PROJECT NO. <b>0506-124</b>	SHEET NO.
DATE 05/01/06		DWG. NAME WELL LOC 241	SCALE 1"=1000'		



## BASIS OF BEARINGS

BASIS OF BEARING USED WAS N00°17'17"E BETWEEN THE SOUTHWEST CORNER AND THE WEST QUARTER CORNER OF SECTION 24, T.20 S., R.1 E., S.L.B. & M.  
LATITUDE = 39°03'21.3920" (39.05594222) NAD 83  
LONGITUDE = -111°45'29.2655" (-111.75812931) NAD 83

RECEIVED

MAY 08 2006

DIV. OF OIL GAS & MINING

# Attachment to Sundry Notice – Changes to Original Drilling Plan

## Wolverine Gas and Oil Company of Utah, LLC

### Change of Drilling Plans for the:

Wolverine Federal Arapien Valley 24-1  
API No. 43-039-30030  
SW/4 NW/4 Sec. 24, T20S, R1E, SLB&M  
Sanpete County, Utah

COPY  
CONFIDENTIAL

### Requested Change

### Original APD

#### Location of Well:

At Surface: 2331' FNL, 549' FWL  
At Navajo Top: 2331' FNL, 549' FWL

2358' FNL, 696' FWL  
792' FNL, 1868' FNL

Note: See revised survey plat.

**Total Depth:** 16,200'

11,500'

#### Casing Program:

<u>Hole Size</u>	<u>Casing Size, Grade, Weight</u>	<u>Depth Interval</u>	<u>Hole Size</u>	<u>Casing Size, Grade, Weight</u>	<u>Depth Interval</u>
30"	24", conductor	0 – 150'	36"	30", conductor	0 – 150'
17.50"	13-3/8", J-55, 68.0#	0 – 3000'	17.50"	13-3/8", J-55, 68.0#	0 – 3500'
12.25"	9-5/8", HCP-110, 47.0#	0 – 11600'	12.25"/8.5"	7", HCP-110, 26.0#	0 – 11500'
8.50"	4-1/2", P -110, 15.1#	0 – 16200'			

Note: See attached table of minimum casing design factors.

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DIV. OF OIL, GAS & MINING

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**Requested Change**

**Original APD**

**Cementing Program:**

Casing Cement Quantity, Type, Yield, and Slurry Weight  
13-3/8" 870 sks, CBM Lite, 4.12 ft<sup>3</sup>/sk, 10.5 ppg  
600 sks, Premium Plus, 1.19 ft<sup>3</sup>/sk, 15.6 ppg  
9-5/8" 650 sks, 50:50 Poz, 1.71 ft<sup>3</sup>/sk, 13.0 ppg  
4-1/2" 1250 sks, 50:50 Poz w/20% Si, 1.47 ft<sup>3</sup>/sk, 14.3 ppg

Casing Cement Quantity, Type, Yield, and Slurry Weight  
13-3/8" 1100 sks, Hi-fill, 3.86 ft<sup>3</sup>/sk, 11.0 ppg  
600 sks, Premium Plus, 1.19 ft<sup>3</sup>/sk, 15.6 ppg  
7" 400 sks, 50:50 Poz, 1.21 ft<sup>3</sup>/sk, 14.35 ppg

**Elevation:** 5554' GR, 5580' KB

5560' GR

**Geologic Formations:**

<u>Formation</u>	<u>Interval-MD</u>	<u>Contents</u>
Arapien	26' (Surf) – 9425'	
Twin Creek	9425' – 9755'	W, G & O
Navajo	9755' – 11507'	W, G & O
Chinle	11507' – 12081'	W
Moenkopi	12081' – 14680'	
Kaibab	14680' – 15259'	W, G & O
Toroweap	15259' – 16200'	W
<b>Total Depth</b>	16200'	

<u>Formation</u>	<u>Interval-MD</u>	<u>Contents</u>
Arapien	Surf – 8800'	
Twin Creek	8800' – 9550'	W, G & O
Navajo	9550' – 11250'	W, G & O
Chinle	11250' – 11500'	W
<b>Total Depth</b>	11500'	

**Pressure Control Equipment:**

A 10k multi-bowl casing spool, 10k single pipe ram BOP, 10k double ram pipe and CSO BOP, 5k annular preventer, and 5k rotating head will be utilized.

The BOPE will be tested as required per BLM Onshore Order 2.

Note: See attached BOPE diagram.

All BOPE was rated 5k and the single set of pipe rams was not included.

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**MAY 08 2006**

**DIV. OF OIL, GAS & MINING**

COPY

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**Requested Change**

**Original APD**

**Drilling Fluids:**

<u>Depth</u>	<u>Mud Weight (ppg)</u>	<u>Type</u>
0' – 3000'	9.2 – 10.0	Salt
3000' – 11600'	9.5 – 10.5	Salt
11600' – 16200'	9.2 – 10.0	Salt

<u>Depth</u>	<u>Mud Weight (ppg)</u>	<u>Type</u>
0' – 3500'	9.6 – 10.2	Salt
3500' – 11500'	10.0 – 10.6	Salt

**Hydrogen Sulfide:**

No significant H<sub>2</sub>S gas is expected, but there is a possibility of it being present in the Kaibab Formation. A H<sub>2</sub>S Contingency Plan will to be in effect before drilling below the Moenkopi (±14400').

No H<sub>2</sub>S Contingency Plan was needed because no H<sub>2</sub>S is present in formations above the Kaibab.

**Pad Layout/Reserve Pit:**

The well location and pad layout have been altered to accommodate a larger drilling rig, to drill only one well rather than multiple wells on the same pad, and to provide for H<sub>2</sub>S contingency plan considerations. Total disturbed area was reduced.

A 390' x 400' drilling pad was originally proposed.

Note: See revised pad layout diagram

**RECEIVED**

**MAY 08 2006**

**DIV. OF OIL, GAS & MINING**

**Wolverine Federal Arapien Valley 24-1**  
**Minimum Casing Design Factors**

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**COPY**

	<u>Surface</u>	<u>Intermediate</u>	<u>Production</u>
Casing O. D. (in)	13.375	9.625	4.500
Casing Grade	J-55	HCP-110	P-110
Weight of Pipe (lbs/ft)	68.0	47.0	15.1
Connection	BTC	LTC	LTC
Top Setting Depth - MD (ft)	0	0	0
Top Setting Depth - TVD (ft)	0	0	0
Bottom Setting Depth - MD (ft)	2000	11600	16200
Bottom Setting Depth - TVD (ft)	2000	11600	16200
Maximum Mud Weight - Inside (ppg)	10.0	10.5	10.5
Maximum Mud Weight - Outside (ppg)	10.0	10.5	10.5
Design Cement Top - TVD (ft)	0	8900	11000
Design Cement Top - MD (ft)	0	8900	11000
Max. Hydrostatic Inside w/ Dry Outside (psi)	1040	6334	8845
Casing Burst Rating (psi)	3450	9440	14420
<b>Burst Safety Factor (1.10 Minimum)</b>	3.32	1.49	1.63
Max. Hydrostatic Outside w/ Dry Inside (psi)	1040	6334	8845
Collapse Rating (psi)	1950	7100	14340
<b>Collapse Safety Factor (1.10 Minimum)</b>	1.88	1.12	1.62
Casing Weight in Air (kips)	136.0	545.2	244.6
Body Yield (kips)	1069	1453	485
Joint Strength (kips)	1140	1213	406
<b>Tension Safety Factor (1.60 Minimum)</b>	7.86	2.22	1.66

**RECEIVED**

**MAY 08 2006**

**DIV. OF OIL, GAS & MINING**

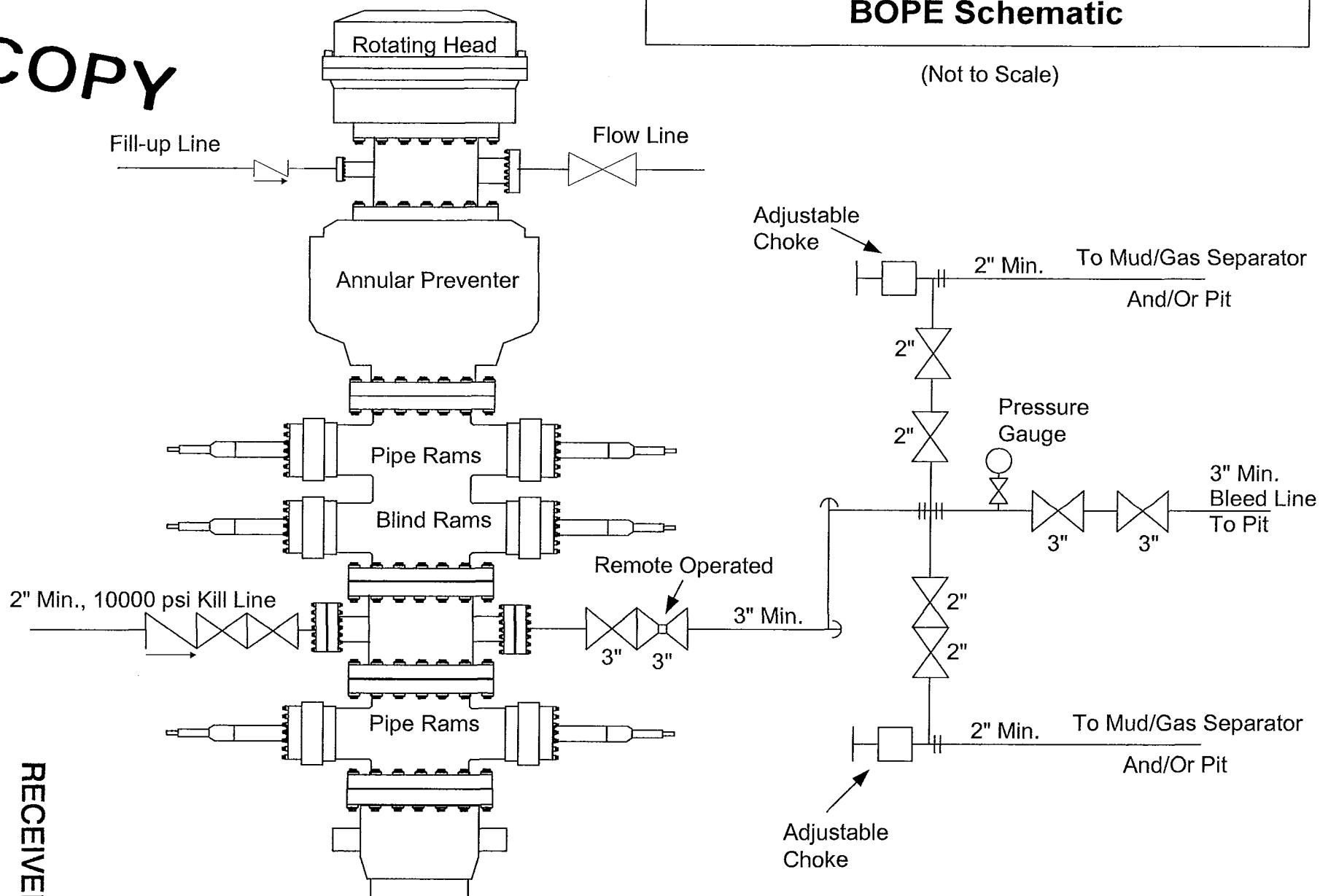


CONFIDENTIAL

COPY

# Wolverine Federal Arapien Valley 24-1 BOPE Schematic

(Not to Scale)



DIV. OF OIL, GAS & MINING

MAY 08 2006

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RECEIVED

MAY 08 2006

DIV. OF OIL, GAS &amp; MINING

COPY

**PAD EARTHWORK VOLUMES**

CUT = 14,635 yards

REQ'D FILL = 11,328 yards

PIT CAPACITY = 49,772 Bbls (2' FREEBOARD)

PIT VOLUME = 14,119 C.Y.

TOTAL PAD AREA: 3.235 ACRES

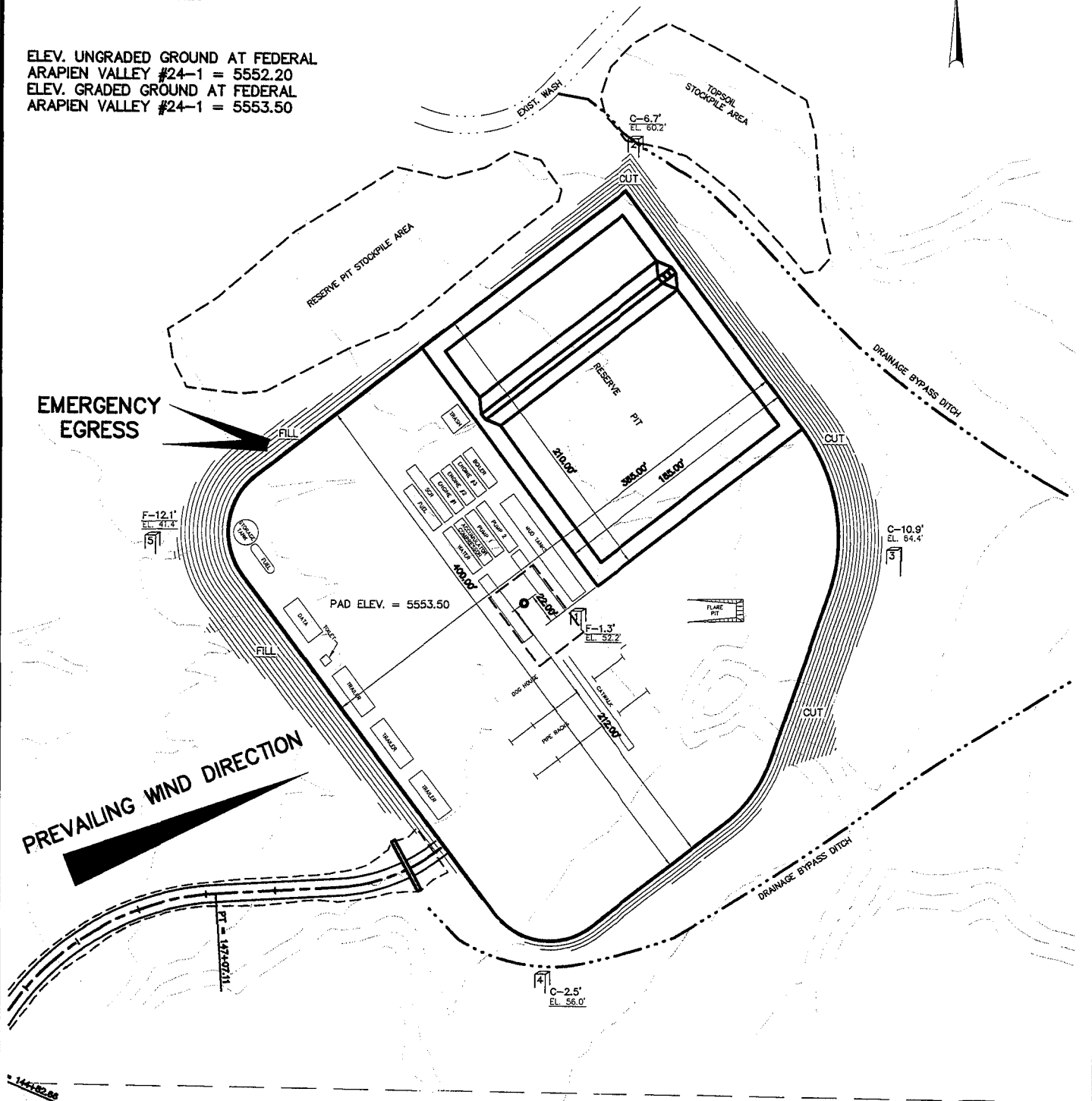
PIT AREA: 0.913 ACRES

ELEV. UNGRADED GROUND AT FEDERAL

ARAPIEN VALLEY #24-1 = 5552.20

ELEV. GRADED GROUND AT FEDERAL

ARAPIEN VALLEY #24-1 = 5553.50

**Jones & DeMille Engineering**

1535 South 100 West - Richfield, Utah 84701

Phone (435) 896-8266 Fax (435) 896-8268

www.jonesanddemille.com



SCALE: 1"=100'

Revised Well Layout for

FIGURE: -

Wolverine Gas and Oil Co. of Utah L.L.C.

Wolverine Federal Arapien Valley 24-1

DRAWN: LG/BL 04-06

PEN TBL: \_1stndrd-hp2800.ctb

PROJECT: 0506-124

SHEET: -

CHECK: DHR 04-06

FILE: DESIGN

LAST UPDATE: 5/1/2006

H2S Contingency Plan

for

***Wolverine Gas and Oil Company of Utah, LLC***

***Wolverine Federal Arapien Valley 24-1***

Section 24  
Township 20S - Range 01E  
Sanpete Co, Utah

Elevation 5554 ft

CONFIDENTIAL

Wolverine Gas and Oil Company of Utah, LLC  
One Riverfront Plaza  
55 Capitol NW  
Grand Rapids, Michigan 49503-2616

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MAY 08 2006

DIV. OF OIL, GAS & MINING

## Table of Contents

Introduction and directions

I. Responsibilities and Duties

- A. All personnel
- B. WOLVERINE GAS AND OIL COMPANY OF UTAH, LLC Foreman
- C. Rig Supervisor- Toolpusher
- D. Safety Consultant
- E. Operations Center Foreman

II. Well Location Layout

- A. Location

III. Safety Procedures

- A. Training
- B. Operating Conditions
- C. Evacuation Plan
- D. Emergency Rescue Procedures

IV. H2S Safety Equipment on Drilling Location

V. Well Ignition Procedures

- A. Ignition Equipment
- B. Ignition Procedures

VI. Residents- Public in Radius of Exposure

- A. Map of area around location

VII. Emergency Phone Directory

- A. WOLVERINE GAS AND OIL COMPANY OF UTAH, LLC
- B. Emergency Services Phone List

VIII. Reference for Hydrogen Sulfide and Sulfur Dioxide

**RECEIVED**

**MAY 08 2006**

**DIV. OF OIL, GAS & MINING**

### Introduction

It is the policy of WOLVERINE GAS AND OIL COMPANY OF UTAH, LLC to provide a safe and healthful work environment for all of its employees as well as contractors that may work on WOLVERINE GAS AND OIL COMPANY OF UTAH, LLC leases. WOLVERINE GAS AND OIL COMPANY OF UTAH, LLC makes a continued effort to comply with laws and regulations relative to worker safety and health, and to manage all operations in a manner to reduce risk.

The following is a H2S contingency plan for the WOLVERINE GAS AND OIL COMPANY OF UTAH, LLC Wolverine Federal Arapien Valley 24-1 well. It is designed for personnel working on this project to follow in case of an accidental release of hydrogen sulfide during drilling and or completion operations. For the plan to be effective, all personnel must review and be familiar with onsite duties as well as the safety equipment involved.

The purpose of this plan is to act as a guideline for personnel working on the wellsite in the event of a sudden release of hydrogen sulfide. All personnel working on the wellsite as well as service personnel that may travel to location on an unscheduled basis must be familiar with this program. The cooperation and participation of all personnel involved with the drilling operation is necessary for this plan to be effective.

Directions to location:

From the town of Mayfield in Sanpete County, go approximately 4 miles south on county road, then turn southwesterly for 2 miles on lease road to location.

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## **I. Duties & Responsibilities**

In order to assure proper execution of the contingency plan, it is essential that one person be responsible for and in complete charge of implementing the procedures outlined in this plan. The order of responsibility will be as follows:

1. WOLVERINE GAS AND OIL COMPANY OF UTAH, LLC representative on location - if unable to perform his/ her duties
2. Alternate WOLVERINE GAS AND OIL COMPANY OF UTAH, LLC representative - if unable to perform his/ her duties
3. Rig Toolpusher/ Supervisor - if unable to perform his/ her duties
4. Safety consultant representative- if available

### **A. All Personnel**

1. Always be alert for possible H2S alarms- both audible and visual.
  2. Be familiar with location of Safe Briefing Areas (SBA) and protective breathing equipment.
  3. Develop a "wind awareness". Be aware of prevailing wind direction as well as nearby uphill areas, should there be no wind.
  4. Familiarize yourself with nearest escape routes for safe evacuation
  5. Should H2S alarm sound, DON'T PANIC - Remain calm and follow instructions of person in charge.
  6. If the H2S alarms sound:
    - a. Essential personnel shall don the appropriate respiratory protective equipment and follow company procedures. Essential personnel will continue to wear respiratory protective equipment until the area is deemed safe (H2S concentration less than 10 PPM)
    - b. Non-essential personnel shall evacuate to the appropriate safe briefing area using escape-breathing systems. Wait there for further instructions from WOLVERINE GAS AND OIL COMPANY OF UTAH, LLC drilling representative.
- C. Initiate rescue protocol if necessary- following training procedures.

**B. WOLVERINE GAS AND OIL COMPANY OF UTAH, LLC - Foreman**

1. The WOLVERINE GAS AND OIL COMPANY OF UTAH, LLC foreman will confirm that all personnel on location at any time are trained in H2S safety and aware of above list of duties.

2. The WOLVERINE GAS AND OIL COMPANY OF UTAH, LLC foreman will ensure that all personnel observe all safety and emergency procedures.

3. The WOLVERINE GAS AND OIL COMPANY OF UTAH, LLC foreman will make an effort to keep the number of personnel on location to a minimum and to ensure that only essential personnel are on location during critical operations.

4. Should and extreme danger condition exist, the WOLVERINE GAS AND OIL COMPANY OF UTAH, LLC foreman will:

- a. Assess the situation and advise all personnel by appropriate means of communication.
- b. Be responsible for determining that the extreme danger condition is warranted and the red flag shall be posted at location entrance.
- c. Go to safe briefing area and give clear instructions relative to hazard on location, and actions for personnel to follow.
- d. Notify company and regulatory groups of current situation as outlined in company protocol. Follow appropriate emergency procedures for emergency services notification.
- e. Proceed to rig floor and supervise operations with rig supervisor. Take action to control and reduce the H2S hazard.
- f. Ensure that essential personnel are properly protected with supplied air breathing equipment and that non-essential personnel are in a "poison gas free" area.
- g. Be responsible for authorizing evacuation of persons/ residents in area surrounding the drilling location.
- h. Commence any ignition procedures if ignition criteria are met.

### C. Rig Supervisor- Toolpusher

1. If the WOLVERINE GAS AND OIL COMPANY OF UTAH, LLC foreman is unable to perform his/ her duties, and the alternate foreman is also unable or unavailable to perform his duties, the drilling rig toolpusher will assume command of wellsite operations and all responsibilities listed above for drilling foreman.

2. Ensure that all rig personnel are properly trained to work in H2S environment and fully understand purpose of H2S alarms, and actions to take when alarms activate. Ensure that all crew personnel understand the buddy system, safe briefing areas, and individual duties as well as emergency evacuation procedures.

3. Should any extreme danger operational condition arise, the rig toolpusher shall assist the WOLVERINE GAS AND OIL COMPANY OF UTAH, LLC foreman by:

- a. Proceeding to the rig floor and assist in supervising rig operations.
- b. Ensure that only essential working personnel remain in hazardous areas.
- c. Ensure that all crewmembers that remain in hazardous area, wear respiratory protective equipment until notified that area is "clear" of any toxic gases.
- d. Assign rig crewmember or other service representative to block entrance to location. No unauthorized personnel will be allowed entry to location.
- e. Help to determine hazardous "danger zones" on location using portable detection equipment and position electric fans to move gas in any high concentration areas.



#### **D. Safety Consultant**

1. During normal operations (no H2S present), the safety consultant will be responsible for the following:

- a. Ensure that all wellsite safety equipment is in place and operational.
- b. Ensure that all wellsite personnel are familiar with location safety layout and operation of all safety equipment.
- c. Assist the WOLVERINE GAS AND OIL COMPANY OF UTAH, LLC foreman in performing weekly H2S drills for location personnel.

2. When an operational condition is classified as extreme danger, the safety consultant will be responsible for the following:

- a. Account for all wellsite personnel
- b. Assess any injuries and direct first aid measure.
- c. Ensure that all safety and monitoring equipment is functioning properly and available.
- d. Monitor the safety of wellsite personnel
- e. Maintain a close communication with WOLVERINE GAS AND OIL COMPANY OF UTAH, LLC foreman.
- f. Be prepared to assist WOLVERINE GAS AND OIL COMPANY OF UTAH, LLC foreman with support for rig crew or other personnel using breathing equipment.
- g. Be prepared to assist WOLVERINE GAS AND OIL COMPANY OF UTAH, LLC foreman with emergency procedures including possible well ignition.
- h. Be prepared to assist with evacuation of any area residents or other personnel working in the immediate area.

#### **E. Operation Center Foreman**

1. The WOLVERINE GAS AND OIL COMPANY OF UTAH, LLC Operations Center Foreman will be responsible for notifying and maintaining contact with company production manager as well as other company supervisory personnel.

2. Maintain communication with the WOLVERINE GAS AND OIL COMPANY OF UTAH, LLC foreman to proceed with any other assistance that might be required.

3. Travel to wellsite if appropriate

4. Assist WOLVERINE GAS AND OIL COMPANY OF UTAH, LLC foreman with all other notifications - both company and regulatory.

## II. Well Location Layout

### A. Location

1. All respiratory protective equipment and H2S detection equipment will be rigged up prior to drilling the production casing hole section beginning at 10,900' or once the Chinle formation has been encountered. The rig crews and other service personnel will be trained at this time. All rig crews will be trained and all safety equipment in place and functioning prior to drilling below this depth.

2. The drilling rig will be situated on location to allow for the prevailing winds to blow across the rig toward the circulation tanks or at right angles to the lines from the B.O.P.s to the circulation tanks or as near this configuration as possible.

3. The entrance to the location is designed so that it can be barricaded if a hydrogen sulfide emergency condition arises. An auxiliary exit route will be available so that in case of an emergency, a shift in wind direction would not prevent escape from the location.

4. A minimum of 2 safe briefing areas (SBA) shall be designated for assembly of personnel during emergency conditions. These will be located at least 150 ft. or as practical, from the wellbore and in such a location that at least one area will be upwind of the well at all times. Upon recognition of an emergency situation, all personnel will be trained to assemble at the designated briefing area for instructions.

5. Smoking areas will be established and "No Smoking" signs will be posted around the location.

6. Reliable 24 hour telephone communications will be available at the drilling foremen's office.

7. A mud-gas separator will be rigged up and manifolded to the choke system.

8. All equipment that might come in to contact with hydrogen sulfide - drill pipe, drill stem test tools, blowout preventers, casing, choke system will meet WOLVERINE GAS AND OIL COMPANY OF UTAH, LLC's metallurgy requirements for H2S service.

9. The drilling rig will have a continuous electronic H2S detection system that automatically will activate visible and audible alarms if hydrogen sulfide is detected. The visible light will activate if 10 ppm H2S is present. The audible siren will activate if 15 ppm H2S or higher concentration is present. There will be at least 4 H2S sensors in place on the drilling rig. They will be located to detect the presence of hydrogen sulfide in areas where it is most likely to come to surface. The sensor head locations will be: 1) rig floor by driller's console, 2) substructure area near the bell nipple, 3) the shale shaker, 4) the mud mixing area. Additional sensors will be positioned at the discretion of the drilling foreman. At least 1 light and 1 siren will be placed on the rig to indicate the

presence of hydrogen sulfide. The light and siren will be strategically placed to be visible to all personnel on the drill site. Additional alarm lights & sirens may be added to ensure that all personnel on the drill site are able to notice the alarms at any time.

10. The H<sub>2</sub>S detection equipment will be calibrated as recommended by the manufacturer. Calibration records will be maintained on location.

11. A least 4 windsocks will be placed around the drill site to ensure that everyone on the drilling location can readily determine wind direction. One windsock will be mounted on or near the rig floor to be readily visible to rig crews when tripping pipe.

12. All respiratory protective equipment will be NIOSH/ MSHA approved positive pressure type and maintained according to manufacturer's guidelines. All breathing air used for this equipment will be CGA type Grade D breathing air.

13. Both 30-minute self-contained breathing apparatuses (SCBA) and workline units with escape cylinders will be available on location. There will be sufficient numbers of this supplied air breathing equipment on location to ensure that all personnel on location have 1 piece of equipment available to them. All respiratory protective equipment will use nose cups to prevent fogging in temperatures below 32 F. Spectacle kits will be available for personnel that require corrective lenses when working under mask.

14. Electric explosion- proof ventilating fans (bug blowers) will be available to provide air movement in enclosed areas where gas might accumulate.

15. H<sub>2</sub>S drills will be conducted at least weekly to ensure that all well site personnel are competent in emergency donning procedures. These drills will be recorded in the driller's log, as well as in the safety trailer logbook.

16. Electronic voice-mikes will be available for essential personnel to use when working under mask to facilitate communication.

17. Additional breathing equipment will be provided for non routine operations that require additional service personnel on the well location to ensure that all personnel on the well location have a dedicated supplied air respirator.

18. Location access will be monitored and controlled during "non- routine" operations such as perforating, pressurized pumping, and well testing. The number of personnel on location will be restricted to "essential" personnel only.

### III. Safety Procedures

#### A. Training

All personnel who come onto the location must be properly trained in hydrogen sulfide, nitrogen, and oxygen deficient atmospheres safety. The personnel shall carry documentation with them indicating that the training has occurred within the previous 12 months. All training will comply with federal and state regulatory guidelines.

Training topics shall include at a minimum:

1. Hazards and characteristics of hydrogen sulfide, nitrogen, and oxygen deficient atmospheres and symptoms of exposure to these gases.
2. Proper use, care and limitations of respiratory protective equipment with hands on practice.
3. Use of both fixed and portable detection toxic gas equipment.
4. Work practices to reduce opportunities for toxic gas exposure as well as confined space procedures.
5. First aid for toxic gas exposure and resuscitation equipment.
6. The buddy system
7. Emergency evacuation procedures
8. A review of the contingency plan for the well.

#### B. Operating Conditions

A three color- flag warning system will be used to notify personnel approaching the drill site as to operating conditions on the wellsite. This system is in compliance with BLM OO#6 and follows industry standards.

Green Flag - Potential Danger

Yellow Flag - Moderate Danger

Red Flag- Extreme Danger - Do Not approach if red flag is flying.

#### IV. H2S Safety Equipment on Drilling Location

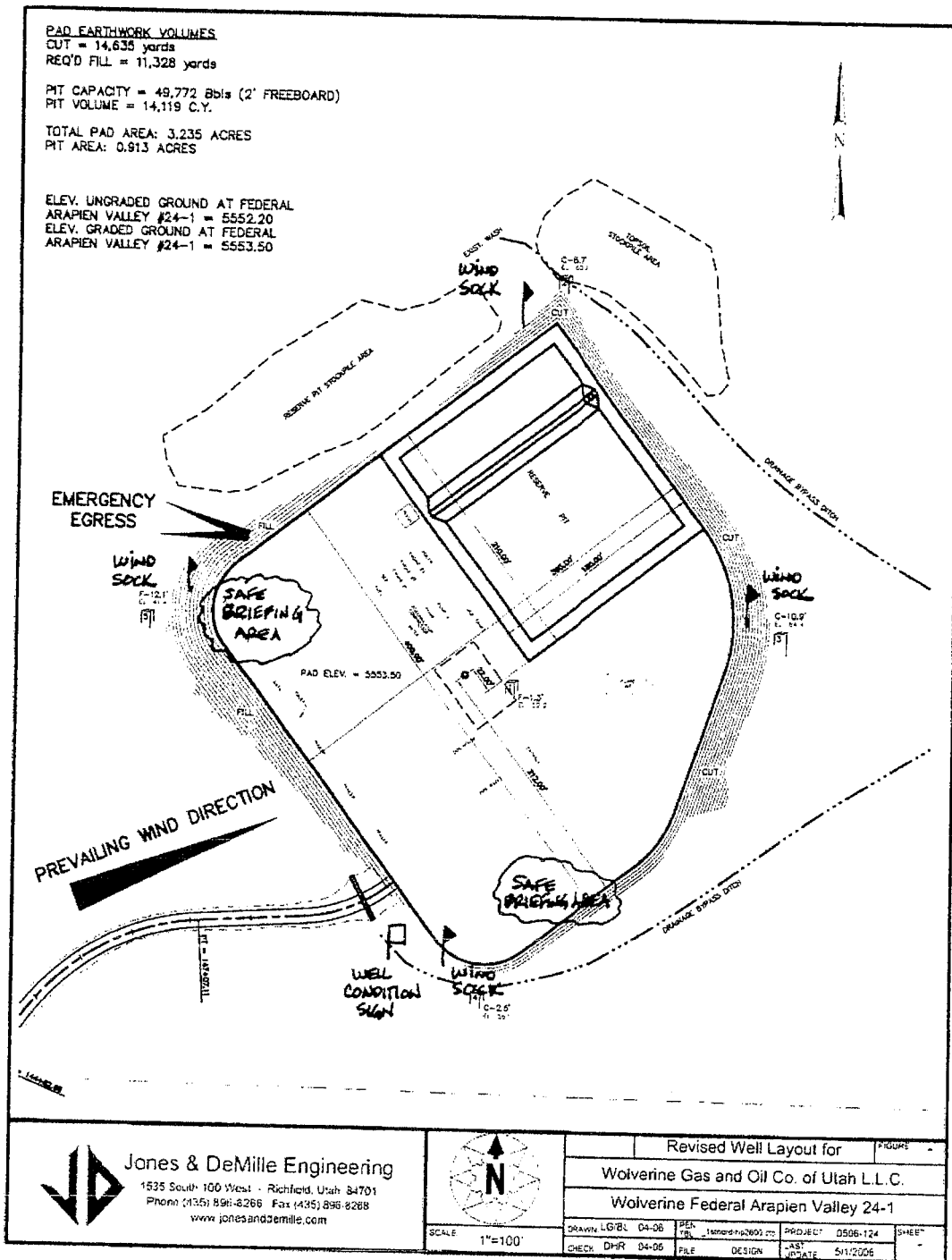
Item	Amount	Description
1.	1	safety trailer with a cascade system of 10-300 cu. ft bottles of compressed breathing air complete with high-pressure regulators
2.	At least 1000 ft.	Low-pressure airline equipped with Hanson locking fittings. This airline will be rigged up with manifolds to supply breathing air to the rig floor, substructure, derrick, shale shaker area, and mud mixing areas. Three high-pressure refill hoses will be attached to cascade systems for cylinder refill.
3.	Twelve (12)	Scott 30 minute self-contained breathing apparatuses (SCBA).
4.	Twelve (12)	Scott airline units with emergency escape cylinders.
5.	One (1)	4- channel continuous electronic H2S monitor with audible and visual alarms. The set points for these alarms are 10 ppm for the low alarm and 15 ppm for the high alarm.
6.	Two (2)	Sensidyne portable hand operated pump type detection units with tubes for hydrogen sulfide and sulfur dioxide.
7.	One (1)-oxygen resuscitator with spare oxygen cylinder.	
8.	One (1)-trauma first aid kit	
9.	One (1)	stokes stretcher and one (1) KED.
10.	Four	windsocks
11.	At least one (1)	well condition sign with 3 flag system.
12.	Two (2)	Safe Briefing Area (SBA) signs
13.	One (1)-fire blanket	

- |     |           |   |
|-----|-----------|---|
| 14. | One (1)   | set air splints   |
| 15. | Two (2)   | electric explosion proof fans   |
| 16. | One (1)   | bullhorn and chalk board  |
| 17. | Three (3) | 300 cu. ft. air bottles for the safe briefing area.                   |
| 18. | Two (2)   | 30 # fire extinguishers   |
| 19. | Six (6)   | battery powered voice mikes for communication when wearing air masks. |
| 20. | One (1)   | battery powered combustible gas meter                                 |

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## V. Well Ignition Procedures

If it should become apparent that an uncontrolled release of hydrogen sulfide to the atmosphere might endanger the health and safety of the public or well site personnel, the WOLVERINE GAS AND OIL COMPANY OF UTAH, LLC drilling foreman will make a decision to ignite the well. The following procedure should be followed before attempting to ignite the well.

A. Ignition equipment - The following equipment will be available for on-site for use by the ignition team.

1. 2-12 gauge flare guns with flare shells
2. 2-500 ft. Fire resistant retrieval ropes
3. 1 portable combustible gas meter
4. Self contained breathing apparatus (SCBA) for each member of the ignition team.
5. 1 backup vehicle with communication equipment

B. Ignition Procedures

1. The WOLVERINE GAS AND OIL COMPANY OF UTAH, LLC drilling foreman will ensure that well site personnel are evacuated to a safe area upwind of the well bore prior to any ignition action.
2. The WOLVERINE GAS AND OIL COMPANY OF UTAH, LLC foreman and a designated partner "buddy" backed up by well site safety personnel will comprise the ignition team. All team members will be wearing 30 minute SCBAs.
3. The backup crew will be positioned near a radio-equipped vehicle at a safe distance from the sour gas release. They will standby to rescue the actual team igniting the well.
4. The partner of the ignition team will carry a combustible gas/ hydrogen sulfide meter to continuously monitor the area in which they are working and define the perimeter of the gas cloud.
5. The WOLVERINE GAS AND OIL COMPANY OF UTAH, LLC foreman will carry the flare gun and shells.
6. The ignition team will determine the hazardous area and establish safe working perimeters. Once this is identified the team will proceed upwind of the leak and fire into the area with flare gun. If trouble is encountered in trying to light the leak, retry to ignite by firing the flare shells at 45 and 90 angles to the gas source, but DO NOT approach closer to the leak.
7. After ignition, monitor for sulfur dioxide and work with the support group to restrict access to the contaminated area.



## **VI. Residents - Public in R.O.E.**

There are no permanent residents within a 2-mile radius of the well site. WOLVERINE GAS AND OIL COMPANY OF UTAH, LLC may have personnel working in the area and their contact numbers will be included. The surrounding area is federally and privately owned and maintained. This land may be used for recreational purposes including hunting and recreational vehicles any time during the drilling or completion of this well.

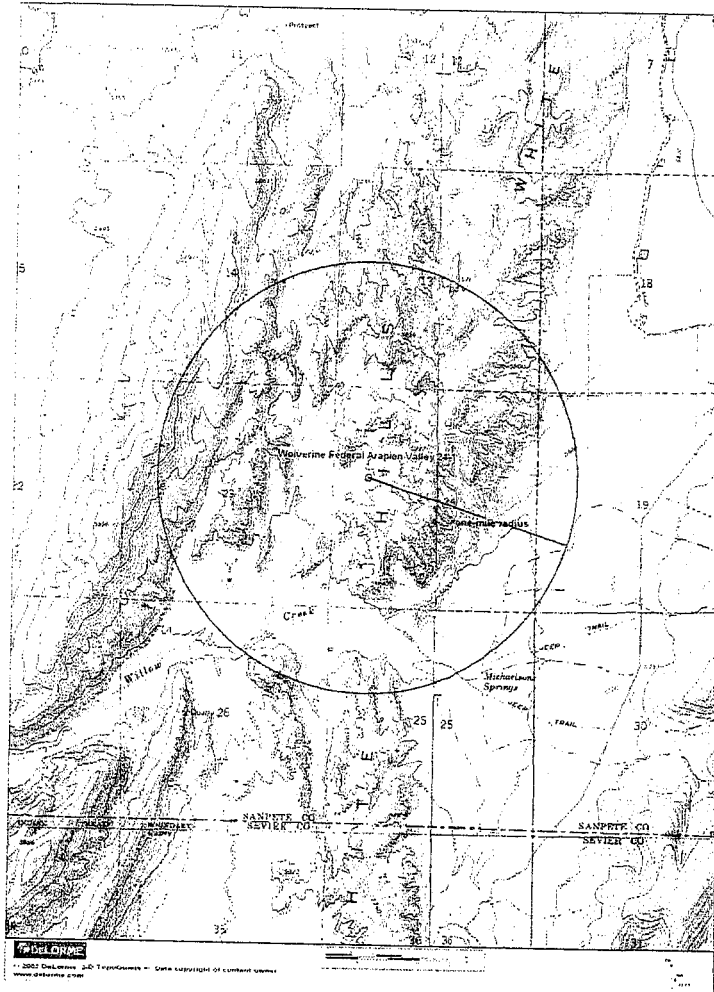
## **VII. Emergency Phone Directory**

### **WOLVERINE GAS AND OIL COMPANY OF UTAH, LLC**

Steven R Hash	(Drilling Mgr – EXACT Engineering, Inc)	office 918-599-9400 cell 918-599-9801
Doc Asay	(Drilling Mgr – SST Drilling)	office 307-235-3529 cell 307-259-1242
Darren Naylor	(On Site Rep – Wolverine Operating Co)	cell 918-645-6671
Ed Higuera	(Operations Manager – Wolverine)	office 616-458-1150

### **B. Emergency Services Phone List**

- |   |                     |
|---|---------------------|
| 1. Sevier Valley Medical Center, Sevier County Utah | 435-896-8271        |
| 2. Ambulance Services – Sevier County Utah          | 911                 |
| 3. Sheriff Department- Sevier County Utah           | 911 or 435-896-2600 |
| 4. Highway Patrol - Sevier County Utah              | 911 or 435-896-6471 |
| 5. Fire Department – Sevier County Utah             | 911 or 435-896-2600 |
| 6. Bureau of Land Management – Richfield, Utah      | 911 or 435-896-1500 |
| 7. Medical Helicopter – Sevier County Utah          | 911 or 435-896-2600 |
| 8 Burn Center, Sevier County Utah                   | 911 or 435-896-2600 |
| 9. Utah OSHA (Mark LeBlanc)                         | 801-530-6862        |



# ONE-MILE RADIUS PLAT

*proposed*  
 O Wolverine Federal Arapien Valley 24-1 well  
 Section 24 T20S R1E  
 Sanpete County, Utah

Wolverine Gas and Oil Company of Utah, LLC  
 One Riverfront Plaza, 55 Campau NW  
 Grand Rapids, Michigan 49503  
 (616) 458-1150

(not to scale)  
 prep by EXACT Engineering, Inc. 5/1/2006

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### II A. Location Layout for Workover/ Completion

1. If H<sub>2</sub>S is previously determined during drilling operations to exist, all H<sub>2</sub>S safety equipment will be available at the time that personnel first move onto the well site. Respiratory protection equipment as well as detection equipment will be on hand should any H<sub>2</sub>S gas be detected during the initial rig up period.

## PROPERTY OF GAS

If gas should be produced, it could be a mixture of Carbon Dioxide, Hydrogen Sulfide, and Methane.

### TOXICITY OF VARIOUS GASES

<u>Common Name</u>	<u>Chemical Formula</u>	<u>Specific Gravity of Air=1</u>	<u>1 Threshold Limit</u>	<u>2 Hazardous Limit</u>	<u>3 Lethal Concern</u>
Hydrogen Cyanide	HCN	0.94	10 ppm	150 ppm/hr	300 ppm
Hydrogen Sulfide	H <sub>2</sub> S	1.18	10 ppm	250 ppm/hr	600 ppm
Sulfur Dioxide	SO <sub>2</sub>	2.21	2 ppm	-----	1,000 ppm
Chloride	CL <sub>1</sub>	2.45	1 ppm	4 ppm/hr	1,000 ppm
Carbon Monoxide	CO	0.97	50 ppm	400 ppm/hr	1,000 ppm
Carbon Dioxide	CO <sub>2</sub>	1.52	5,000 ppm	5%	10%
Methane	CH <sub>4</sub>	0.55	90,000 ppm	Combustible Above 5% in Air	-----

1 Threshold=Concentration at which it is believed that all workers may repeatedly be exposed, day after day, without adverse side effects.

2 Hazardous=Concentration that may cause death.

3 Lethal=Concentration that will cause death with short-term exposure.

# HYDROGEN SULFIDE

## GENERAL PROPERTIES

Hydrogen Sulfide itself is a colorless and transparent gas and is flammable. It is heavier than air and, hence, may accumulate in low places.

Although the slightest presence of H<sub>2</sub>S in the air is normally detectable by its Characteristic "Rotten Egg" odor, it is dangerous to rely on the odor as a means of detecting excessive concentrations because the sense of smell is rapidly lost allowing lethal concentrations to be accumulated without warning. The following table indicates the poisonous nature of Hydrogen Sulfide, which is more toxic than Carbon Monoxide.

COMMON NAMES: Sour Gas, Rotten Egg Gas, Sulphurated Hydrogen, Hydrogen sulfide, Stink Damp, H<sub>2</sub>S, Acid Gas, Sweet Gas\*

## PHYSICAL-CHEMICAL PROPERTIES

- Chemical Formula ..... H<sub>2</sub>S
1. Specific Gravity (Air = 1.000)..... 1.193 (@ 77°F)
2. Color ..... None
3. Odor ..... Compared to Rotten Eggs
4. Odor Threshold ..... 0.13 part of 1 ppm
5. Corrosivity ..... Reacts with metals, plastics, tissues and nerves.
6. Solubility in Water..... 4.0 to 1 in H<sub>2</sub>O @ 32°F  
2.6 to 1 in H<sub>2</sub>O @ 68°F
7. Effects on Humans ..... Olfactory nerves, respiratory nerves, irritates sensitive membranes in eyes, nose, and throat.
8. Vapor Pressure ..... 19.6 atmospheres at 25°C
9. Explosive Limits ..... 4.3% to 46% by volume in air.

\* H<sub>2</sub>S is a sweet tasting Gas, but often the word "tasting" is left out.

10. Ignition Temperature..... 18°F (Burns with a pale blue flame)
11. Molecular Weight..... 34.08
12. Conversion Factors..... 1 mg/1 of air = 717 ppm (at 25°C and 760 mm HG). 1 ppm = 0.00139 mg/1 of air.
13. pH..... 3 in water

### INDUSTRIAL OCCURRENCES

Hydrogen Sulfide exposures occur in certain processes in the petroleum industry, chemical plants, chemical laboratories, sulfur and gypsum mines, viscose rayon and rubber industries, tanneries, and in the manufacture of some chemicals, dyes, and pigments. It may be encountered in excavations in the swampy or filled ground. It is produced when sulfur-containing organic matter decomposes, and it can therefore be found in sewage or organic-waste treatment plants. A common sewer gas, it may find its way into utility manhole, particularly dangerous when encountered in tanks, vessels, and other enclosed spaces.

### TOXIC PROPERTIES

Hydrogen Sulfide is an extremely toxic and irritating gas. Free Hydrogen Sulfide in the blood reduces its oxygen carrying capacity, thereby depressing the nervous system. Sufficiently high concentrations can cause blockage of the phrenic nerve, resulting in immediate collapse and death due to respiratory failure and asphyxiation.

Because Hydrogen Sulfide is oxidized quite rapidly to sulfates in the body, no permanent after effects occur in cases of recovery from acute exposures unless oxygen deprivation of the nervous system is prolonged. However, in cases of acute exposures, there is always the possibility that pulmonary edema may develop. It is also reported that symptoms such as nervousness, dry nonproductive coughing, nausea, headache, and insomnia, lasting up to about 3 days have occurred after acute exposures to Hydrogen Sulfide.

At low concentrations the predominant effect of Hydrogen Sulfide is on the eyes and respiratory tract. Eye irritation, conjunctivitis, pain, lacrimation, keratitis, and photophobia may persist for several days. Respiratory tract symptoms include coughing, painful breathing, and pain in the nose and throat.

There is no evidence that repeated exposures to Hydrogen Sulfide results in accumulative or systemic poisoning. Effects such as eye irritation, respiratory tract irritation, slow pulse rate, lassitude, digestive disturbances, and cold sweats may occur, but these symptoms disappear in a relatively short time after removal from the exposure. Repeated exposures to Hydrogen Sulfide does not appear to cause any increase or decrease in susceptibility to this gas.

The paralytic effect of Hydrogen Sulfide on the olfactory nerve is probably the most significant property of the gas. This paralysis may create a false sense of security. A worker can be overcome after the typical rotten-egg odor has disappeared. Rather than the characteristic Hydrogen Sulfide odor, some victims of sudden acute overexposure have reported a brief sickeningly sweet odor just prior to unconsciousness.

Subjective olfactory responses to various concentrations of Hydrogen Sulfide have been summarized as follows:

0.02 ppm	No odor
0.13 ppm	Minimal perceptible odor
0.77 ppm	Faint, but readily perceptible odor
4.60 ppm	Easily detectable, moderate odor
27.0 ppm	Strong, unpleasant odor, but not intolerable

Physiological responses to various concentrations of Hydrogen Sulfide have been reported as follows:

10 ppm	Beginning eye irritation
50-100 ppm	Slight conjunctivitis and respiratory tract irritation after 1 hour exposure
100 ppm	Coughing, eye irritation, loss of sense of smell after 2-15 minutes. Altered respiration, pain in the eyes, and drowsiness after 15-30 minutes, followed by throat irritation after 1 hour. Several hours <sup>1</sup> exposure results in gradual increase in severity of these symptoms and death may occur within the next 48 hours.
200-300 ppm	Marked conjunctivitis and respiratory tract irritation after 1 hour exposure
500-700 ppm	Loss of consciousness and possibly death in 30 minutes.
700 ppm	Rapid unconsciousness, cessation of respiration, and death.
1000-2000 ppm	Unconsciousness at once, with early cessation of respiration and death in a few minutes. Death may occur even if individual is removed to fresh air at once.

## ACCEPTABLE CONCENTRATIONS

### ACCEPTABLE EIGHT-HOUR TIME-WEIGHTED AVERAGE

To avoid discomfort, the Time-Weighted average concentration of Hydrogen Sulfide Shall not exceed 10 ppm.

### ACCEPTABLE CEILING CONCENTRATION

The acceptable concentration for protection of health for an eight-hour, five-day week shall be 20 ppm, Fluctuations are to occur below this concentration.

### ACCEPTABLE MAXIMUM FOR PEAKS ABOVE ACCEPTABLE BASE LINE FOR CONTINUOUS EXPOSURE

A single-peak concentration not exceeding 50 ppm for a maximum of 10 minutes is allowable provided that the daily time-weighted average is not exceeded.

## H<sub>2</sub>S EQUIVALENTS

<u>Parts Per Million</u>	<u>Percents</u>	<u>Grains per 100 cu. Ft.</u>
1	.0001	.055
10	.001	.55
18	.0018	1.0
100	.01	5.5
1000	.1	55.5
10000	1.0	555.5

Grains per 100 cu. Ft. = % by volume Mole 636.4  
1% by volume = 10,000 ppm



# SULFUR DIOXIDE

Sulfur Dioxide (SO<sub>2</sub>) is a colorless, transparent gas and is non-flammable.

Sulfur Dioxide is produced during the burning of H<sub>2</sub>S. Although SO<sub>2</sub> is heavier than air, it will be picked up by a breeze and carried downwind at elevated temperatures, While Sulfur Dioxide is extremely irritating to the eyes and mucous membranes of the upper respiratory tract, it has exceptionally good warning powers in this respect.

## CONCENTRATIONS

## EFFECTS

<u>%SO<sub>2</sub></u>	<u>ppm</u>	
.0002	2	Safe for eight (8) hour exposure
.0005	5	Pungent odor-normally a person can detect SO <sub>2</sub> in this range.
.0012	12	Throat irritation, coughing, constriction of the chest, tearing and smarting of the eyes.
.015	150	So irritating that it can only be endured for a few minutes.
.05	500	Causes a sense of suffocation, even with the first breath.

## PHYSICAL PROPERTIES AND CHARACTERISTICS

Chemical Formula .....	SO <sub>2</sub>
1. Specific Gravity .....	2.212
2. Color .....	None
3. Flammable .....	No
4. Odor .....	Characteristic, pungent, gives ample warning of its presence.
5. Corrosivity .....	Dry---not corrosive to ordinary metals. Wet---corrosive to most common metals.
6. Allowable Concentrations .....	2 ppm (ACGIH) 2 ppm (OSHA)
7. Effects on Humans.....	Irritates eyes, throat and upper Respiratory system.

## TOXIC PROPERTIES

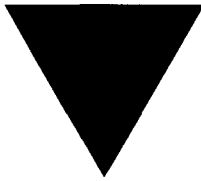
Sulfur Dioxide is an irritating gas in its vapor form and the odor is so intensely irritating that concentrations of 3 to 5 parts per million in the air are readily detectable by the normal person. In higher concentrations, the severely irritating effect of the gas makes it unlikely that any person would be able to remain in a Sulfur Dioxide contaminated atmosphere unless they were unconscious or trapped.

Sulfur Dioxide gas is intensely irritating to the eyes, throat, and upper respiratory system. Inhalation of this gas in concentrations of 8 to 12 parts per million in air causes throat irritation, coughing, constriction of the chest, tearing and smarting of the eyes. 150 parts per million is so extremely irritating that it can be endured only for a few minutes. 500 parts per million is so acutely irritating to the upper respiratory tract that it causes a sense of suffocation, even with the first breath.

Out of numerous reported exposures to Sulfur Dioxide, there are few references that would indicate pneumonia as an after effect.

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MAY 15 2006



DIV. OF OIL, GAS & MINING  
**WOLVERINE GAS AND OIL COMPANY**  
of Utah, LLC

*Energy Exploration in Partnership with the Environment*

May 10, 2006

Mr. Gil Hunt  
State of Utah  
Division of Oil, Gas and Mining  
P.O. Box 145801  
Salt Lake City, Utah 84114-5801

Re: Wolverine Federal Arapien Valley 24-1,  
API #43-039-30030,  
2331' FNL, 549' FWL, (SW/4 NW/4),  
Section 24, T. 20 South, R. 1 East, SLB&M,  
Sanpete County, Utah

Dear Mr. Hunt:

An APD was originally submitted and approved to drill the referenced well directionally to a total depth of 11,500'. Wolverine Gas and Oil Company of Utah, LLC (Wolverine) has subsequently submitted a Sundry Notice requesting to drill the well as a vertical well to a depth of 16,200 feet. The well location was also adjusted to accommodate a larger drilling rig on the drilling pad.

A request for exception to spacing (R649-3-2) is hereby requested for this well based on geology and topography. The proposed well is located within 460' of the drilling unit boundary, but Wolverine is the only owner and operator within 460' of the proposed well location.

Please accept this letter as Wolverine's written request for continued confidential treatment of all information included in this and previous correspondence relating to this well.

Thank you for your consideration of this request. Please feel free to contact me or Ellis Peterson of this office at 616-458-1150 if you have any questions or need additional information.

Sincerely,

Edward Higuera, Manager – Development

cc: BLM, Richfield Field Office

STATE OF UTAH  
DEPARTMENT OF NATURAL RESOURCES  
DIVISION OF OIL, GAS AND MINING

**CONFIDENTIAL**

FORM 9

**SUNDRY NOTICES AND REPORTS ON WELLS**

Do not use this form for proposals to drill new wells, significantly deepen existing wells below current bottom-hole depth, reenter plugged wells, or to drill horizontal laterals. Use APPLICATION FOR PERMIT TO DRILL form for such proposals.

1. TYPE OF WELL OIL WELL ☒ GAS WELL ☐ OTHER \_\_\_\_\_

2. NAME OF OPERATOR:  
Wolverine Gas and Oil Company of Utah, LLC

3. ADDRESS OF OPERATOR: 55 Campau NW CITY Grand Rapids STATE MI ZIP 49503-2616 PHONE NUMBER: (616) 458-1150

4. LOCATION OF WELL

FOOTAGES AT SURFACE: 2331' FNL, 549' FWL

COUNTY: Sanpete

QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN: SWNW 24 20S 1E S

STATE: UTAH

5. LEASE DESIGNATION AND SERIAL NUMBER:  
UTU-80907

6. IF INDIAN, ALLOTTEE OR TRIBE NAME:  
NA

7. UNIT or CA AGREEMENT NAME:  
Wolverine Federal Unit

8. WELL NAME and NUMBER:  
Wolv. Fed. Arapien Valley 24-1

9. API NUMBER:  
4303930030

10. FIELD AND POOL, OR WILDCAT:  
Wildcat

11. CHECK APPROPRIATE BOXES TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA

TYPE OF SUBMISSION	TYPE OF ACTION		
<input checked="" type="checkbox"/> NOTICE OF INTENT (Submit in Duplicate) Approximate date work will start: _____	<input type="checkbox"/> ACIDIZE	<input type="checkbox"/> DEEPEN	<input type="checkbox"/> REPERFORATE CURRENT FORMATION
	<input type="checkbox"/> ALTER CASING	<input type="checkbox"/> FRACTURE TREAT	<input type="checkbox"/> SIDETRACK TO REPAIR WELL
	<input type="checkbox"/> CASING REPAIR	<input type="checkbox"/> NEW CONSTRUCTION	<input type="checkbox"/> TEMPORARILY ABANDON
	<input type="checkbox"/> CHANGE TO PREVIOUS PLANS	<input type="checkbox"/> OPERATOR CHANGE	<input type="checkbox"/> TUBING REPAIR
	<input type="checkbox"/> CHANGE TUBING	<input type="checkbox"/> PLUG AND ABANDON	<input type="checkbox"/> VENT OR FLARE
<input type="checkbox"/> SUBSEQUENT REPORT (Submit Original Form Only) Date of work completion: _____	<input type="checkbox"/> CHANGE WELL NAME	<input type="checkbox"/> PLUG BACK	<input type="checkbox"/> WATER DISPOSAL
	<input type="checkbox"/> CHANGE WELL STATUS	<input type="checkbox"/> PRODUCTION (START/RESUME)	<input type="checkbox"/> WATER SHUT-OFF
	<input type="checkbox"/> COMMINGLE PRODUCING FORMATIONS	<input type="checkbox"/> RECLAMATION OF WELL SITE	<input checked="" type="checkbox"/> OTHER: Request Permit Extension
	<input type="checkbox"/> CONVERT WELL TYPE	<input type="checkbox"/> RECOMPLETE - DIFFERENT FORMATION	

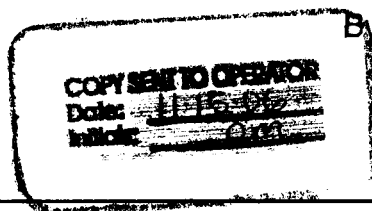
12. DESCRIBE PROPOSED OR COMPLETED OPERATIONS. Clearly show all pertinent details including dates, depths, volumes, etc.

The original APD for the subject well was approved by UDOGM on 11/3/05 and a Sundry Notice changing location and drilling plan was approved on 05/16/06. A one-year extension to the original drilling permit including modifications provided by the subsequent Sundry Notice is hereby requested.

Approved by the  
Utah Division of  
Oil, Gas and Mining

Attachment: APD Request for Permit Extension Validation

Date: 11-14-06  
By: *[Signature]*



NAME (PLEASE PRINT) Ellis M. Peterson

TITLE Senior Production Engineer

SIGNATURE *[Signature]*

DATE 11/9/2006

(This space for State use only)

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DIV. OF OIL, GAS & MINING

**Application for Permit to Drill  
Request for Permit Extension  
Validation**

(this form should accompany the Sundry Notice requesting permit extension)

**API:** 43-039-30030  
**Well Name:** Wolverine Federal Arapien Valley 24-1  
**Location:** 2331' FNL, 549' FWL, Section 24, T20S, R1E  
**Company Permit Issued to:** Wolverine Gas and Oil Company of Utah, LLC  
**Date Original Permit Issued:** 11/3/2005

The undersigned as owner with legal rights to drill on the property as permitted above, hereby verifies that the information as submitted in the previously approved application to drill, remains valid and does not require revision.

Following is a checklist of some items related to the application, which should be verified.

If located on private land, has the ownership changed, if so, has the surface agreement been updated? Yes ☐ No ☐

Have any wells been drilled in the vicinity of the proposed well which would affect the spacing or siting requirements for this location? Yes ☐ No ☒

Has there been any unit or other agreements put in place that could affect the permitting or operation of this proposed well? Yes ☐ No ☒

Have there been any changes to the access route including ownership, or right-of-way, which could affect the proposed location? Yes ☐ No ☒

Has the approved source of water for drilling changed? Yes ☐ No ☒

Have there been any physical changes to the surface location or access route which will require a change in plans from what was discussed at the onsite evaluation? Yes ☐ No ☒

Is bonding still in place, which covers this proposed well? Yes ☒ No ☐

  
Signature

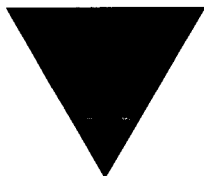
11/9/2006  
Date

Title: Senior Production Engineer

Representing: Wolverine Gas and Oil Company of Utah, LLC

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NOV 13 2006

DIV. OF OIL, GAS & LEASE



## WOLVERINE OPERATING COMPANY

of Utah, LLC

*Energy Exploration in Partnership with the Environment*

November 9, 2006

Mr. Gil Hunt  
Utah Division of Oil, Gas and Mining  
1594 West North Temple, Suite 1210  
Salt Lake City, Utah 84114-5801

Phone: 801-538-5340

Re: Wolverine Federal Arapien Valley 24-1,  
2331' FNL, 549' FWL, (SW/4 NW/4),  
Section 24, T. 20 South, R. 1 East, SLB&M,  
Sanpete County, Utah

Dear Mr. Hunt:

Wolverine Gas and Oil Company of Utah, LLC (Wolverine) respectfully submits the accompanying Sundry Notice with attachment in duplicate requesting an extension to the drilling permit for the subject well.

Please accept this letter as Wolverine's written request for continued confidential treatment of all information included in this and previous correspondence relating to this well.

Thank you for your consideration of this request. Please feel free to contact me or Ed Higuera of this office at 616-458-1150 if you have any questions or need additional information.

Sincerely,

Ellis M. Peterson  
Wolverine Gas and Oil Company of Utah, LLC

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NOV 13 2006

DIV. OF OIL, GAS & MINING

**DIVISION OF OIL, GAS AND MINING**

**SPUDDING INFORMATION**

Name of Company: WOLVERINE GAS & OIL CO UT

Well Name: WOLV FED ARAPIEN VLY 24-1

Api No: 43-039-30030 Lease Type: FEDERAL

Section 24 Township 20S Range 01E County SANPETE

Drilling Contractor PETE MARTIN DRLG RIG # RATHOLE

**SPUDDED:**

Date 10/ 03/07

Time

How DRY

**Drilling will Commence:**

Reported by STEVE HASH

Telephone # (918) 599-9400

Date 10/03/07 Signed CHD

CONFIDENTIAL

**EXACT Engineering, Inc.**  
415 S. Boston Ave., Suite 734  
Tulsa, Oklahoma 74103

**EXACT Engineering, Inc.**[www.exactengineering.com](http://www.exactengineering.com)**Steven R. Hash, P.E.**

office 918.599.9400  
office fax 918.599.9401

cellular 918.629.9801  
[stevehash@exactengineering.com](mailto:stevehash@exactengineering.com)

**fax**

<b>To:</b>	Ms. Earlene Russell – UDOGM	<b>From:</b>	Steve Hash
<b>Fax:</b>	801-359-3940	<b>Pages:</b>	2 total
<b>Phone:</b>	801-538-7200	<b>Date:</b>	Oct 3, 2007
<b>Re:</b>	Wolverine Federal Arapien Valley 24-1 - Form 6 CC:		

Dear Ms. Russell,

On behalf of Wolverine Gas and Oil Company of Utah, LLC, please find attached a State of Utah (form 6) Entity Action Form for the subject new well – API# 43-039-30030. The conductor casing was set on Oct 3, 2007. Actual drilling of this well will likely not commence until late November or early December, 2007. Thank you

Steve Hash



Petroleum Engineering Consulting, Personnel & Jobsite Supervision  
drilling, completion, production, pipelines, compression, evaluations, acquisitions,  
due diligence, procedures, cost estimates, expert testimony

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DIV. OF OIL, GAS &amp; MINING



**STATE OF UTAH**  
DEPARTMENT OF NATURAL RESOURCES  
DIVISION OF OIL, GAS AND MINING

FORM 6

**ENTITY ACTION FORM**Operator: Wolverine Gas and Oil Company of Utah, LLCOperator Account Number: N 1655Address: 55 Campau NW, One Riverfront Plazacity Grand Rapidsstate MIzip 49503-2616Phone Number: (616) 458-1150**Well 1**

API Number	Well Name	QQ	Sec	Twp	Rng	County
4303930030	Wolverine Federal Arapien Valley 24-1	SWNW	24	20S	1E	Sanpete
Action Code	Current Entity Number	New Entity Number	Spud Date	Entity Assignment Effective Date		
A	99999	16417	10/3/2007	10/17/07		
Comments: <u>set conductor 10/3/2007; projected drlg rig move in 11/15/2007</u> <u>NAVA</u>						

**CONFIDENTIAL****Well 2**

API Number	Well Name	QQ	Sec	Twp	Rng	County
Action Code	Current Entity Number	New Entity Number	Spud Date	Entity Assignment Effective Date		
Comments:						

**Well 3**

API Number	Well Name	QQ	Sec	Twp	Rng	County
Action Code	Current Entity Number	New Entity Number	Spud Date	Entity Assignment Effective Date		
Comments:						

**ACTION CODES:**

- A - Establish new entity for new well (single well only)
- B - Add new well to existing entity (group or unit well)
- C - Re-assign well from one existing entity to another existing entity
- D - Re-assign well from one existing entity to a new entity
- E - Other (Explain in 'comments' section)

Steven R Hash - EXACT Engineering Inc

Name (Please Print)

Steven R. Hash

Signature

Engineering Consultant

10/3/2007

Title

Date

(5/2000)

**RECEIVED****OCT 03 2007**

DIV. OF OIL, GAS &amp; MINING

# EXACT Engineering, Inc.

www.exactengineering.com

415 S. Boston Ave., Suite 734, Tulsa, OK 74103 • (918) 599-9400 • (918) 599-9401 (fax)

Steven R. Hash, P.E.  
Registered Professional Engineer  
stevehash@exactengineering.com

November 11, 2007

Mr. Al McKee  
Bureau of Land Management  
Utah State Office  
P.O. Box 45155  
Salt Lake City, UT 84145-0155

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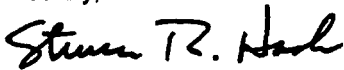
Mr. Dustin Doucet  
Utah Division of Oil, Gas & Mining  
1594 West North Temple, Suite 1210  
Salt Lake City, UT 84114-5801

Re: Drilling Update #2 - Wolverine Federal Arapien Valley 24-1  
Sec 24 T20S R01E  
Sanpete Co, UT  
API# 43-039-30030

Gentlemen,

On behalf of Wolverine Gas and Oil Company of Utah, LLC, please find enclosed daily drilling reports for the subject well for November 4 and 10, 2007. SST Rig #68 is rigged up and the well was spud on November 9, 2007. Drilling of the 17-1/2" hole is presently underway at a depth of 895 feet toward a target 13-3/8" casing point of 2000 feet expected on or about November 12, 2007. We respectfully request that the enclosed information remain confidential.

Sincerely,



Steven R. Hash, P.E.

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NOV 13 2007

Enclosures

copy without enclosures via email to:

Wolverine Gas & Oil Co of Utah, LLC: Helene Bardolph  
EXACT Engineering, Inc. well file

DIV. OF OIL, GAS & MINING

Petroleum Engineering Consulting, Personnel & Jobsite Supervision  
complete well design, construction & management, drilling, completion, production, pipelines, appraisals,  
due diligence, acquisitions, procedures, temporary personnel and field supervision

# DIV. OF OIL, GAS & MINING

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## DIV. OF OIL, GAS & MINING

UNITED STATES  
DEPARTMENT OF THE INTERIOR  
BUREAU OF LAND MANAGEMENTFORM APPROVED  
OMB No. 1004-0137  
Expires: March 31, 2007

## SUNDRY NOTICES AND REPORTS ON WELLS

**Do not use this form for proposals to drill or to re-enter an abandoned well. Use Form 3160-3 (APD) for such proposals.**

**SUBMIT IN TRIPLICATE- Other instructions on reverse side.**

1. Type of Well <input checked="" type="checkbox"/> Oil Well <input type="checkbox"/> Gas Well <input type="checkbox"/> Other		5. Lease Serial No. UTU-80907
2. Name of Operator Wolverine Gas & Oil Company of Utah, LLC		6. If Indian, Allottee or Tribe Name N/A
3a. Address One Riverfront Plaza, 55 Campau NW, Grand Rapids, MI	3b. Phone No. (include area code) 616-458-1150	7. If Unit or CA/Agreement, Name and/or No. Wolverine Federal Unit
4. Location of Well (Footage, Sec., T., R., M., or Survey Description) 2331' FNL & 549' FWL (SW/4 NW4) Section 24, T20S, R1E, SLB&M		8. Well Name and No. Wolverine Fed Arapien Valley 24-1
		9. API Well No. 43-039-30030
		10. Field and Pool, or Exploratory Area Wildcat
		11. County or Parish, State Sanpete Co, UT

## 12. CHECK APPROPRIATE BOX(ES) TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA

TYPE OF SUBMISSION	TYPE OF ACTION			
<input checked="" type="checkbox"/> Notice of Intent	<input type="checkbox"/> Acidize	<input type="checkbox"/> Deepen	<input type="checkbox"/> Production (Start/Resume)	<input type="checkbox"/> Water Shut-Off
<input type="checkbox"/> Subsequent Report	<input checked="" type="checkbox"/> Alter Casing	<input type="checkbox"/> Fracture Treat	<input type="checkbox"/> Reclamation	<input type="checkbox"/> Well Integrity
<input type="checkbox"/> Final Abandonment Notice	<input type="checkbox"/> Casing Repair	<input type="checkbox"/> New Construction	<input type="checkbox"/> Recomplete	<input type="checkbox"/> Other
	<input type="checkbox"/> Change Plans	<input type="checkbox"/> Plug and Abandon	<input type="checkbox"/> Temporarily Abandon	
	<input type="checkbox"/> Convert to Injection	<input type="checkbox"/> Plug Back	<input type="checkbox"/> Water Disposal	

13. Describe Proposed or Completed Operation (clearly state all pertinent details, including estimated starting date of any proposed work and approximate duration thereof. If the proposal is to deepen directionally or recompleat horizontally, give subsurface locations and measured and true vertical depths of all pertinent markers and zones. Attach the Bond under which the work will be performed or provide the Bond No. on file with BLM/BIA. Required subsequent reports shall be filed within 30 days following completion of the involved operations. If the operation results in a multiple completion or recompleat in a new interval, a Form 3160-4 shall be filed once testing has been completed. Final Abandonment Notices shall be filed only after all requirements, including reclamation, have been completed, and the operator has determined that the site is ready for final inspection.)

Permission to change surface casing depth and cement volumes as follows is requested:

Presently authorized 13-3/8" surface casing is as follows:

Casing 13-3/8" 68ppf J55 BTC new API; Setting depth 3000 ft; Cement: Lead w/ 870 sx CBM lite (10.5ppg, 4.12cfps), then Tail w/ 600 sx Premium Plus (15.6ppg, 1.19cfps)

Requested change in 13-3/8" surface casing:

Casing 13-3/8" 68ppf J55 BTC new API; Setting depth 2000 ft; Cement: 1500' Lead w/ 405 sx VARICEM (tm) w/ 1/8 pps flake & 10 pps Gilsontite (10.5ppg, 4.14cfps), then 500' Tail with 410 sx Premium type III w/ 1% Calcium Chloride (on side) (14.8ppg, 1.32cfps)

Casing design safety factors are as follows: Burst 3.32; Collapse 1.88; tension 7.86

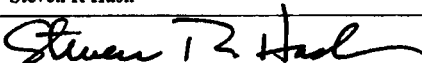
xc: UDOGM - Dustin Doucet

COPY SENT TO OPERATOR

Date: 11-15-07  
Initials: CDO

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NOV 13 2007

14. I hereby certify that the foregoing is true and correct Name (Printed/Typed) Steven R Hash		Title Consulting Engineer - EXACT Engineering Inc
Signature 		Date 11/11/2007

**THIS SPACE FOR FEDERAL OR STATE OFFICE USE**

Approved by Conditions of approval, if any, are attached. Approval of this notice does not warrant or certify that the applicant holds legal or equitable title to those rights in the subject lease which would entitle the applicant to conduct operations thereon.	Title Accepted by the Office Utah Division of Oil, Gas and Mining	Date Federal Approval Of This Action Is Necessary
Title 18 U.S.C. Section 1001 and Title 43 U.S.C. Section 1212, make it a crime for any person knowingly and willfully to make to any department or agency of the United States any false, fictitious or fraudulent statements or representations as to any matter within its jurisdiction.		

(Instructions on page 2)

UNITED STATES  
DEPARTMENT OF THE INTERIOR  
BUREAU OF LAND MANAGEMENT

**SUNDRY NOTICES AND REPORTS ON WELLS**

*Do not use this form for proposals to drill or to re-enter an abandoned well. Use Form 3160-3 (APD) for such proposals.*

FORM APPROVED  
OMB No. 1004-0137  
Expires: March 31, 2007

5. Lease No. **UT 80007**

6. If Indian, Allottee or Tribe Name  
NA **MAY 12 2006**

**SUBMIT IN TRIPLICATE- Other instructions on reverse side.**

1. Type of Well  
☒ Oil Well ☐ Gas Well ☐ Other

2. Name of Operator **Wolverine Gas and Oil Company of Utah, LLC**

3a. Address  
**55 Campau NW, Grand Rapids, Michigan 49503-2616**

3b. Phone No. (include area code)  
**616-458-1150**

4. Location of Well (Footage, Sec., T., R., M., or Survey Description)

**2331' FNL, 549' FWL (SW/4 NW/4), Section 24, T20S, R1E, SLB&M**

**Richfield BLM Field Office**  
Wolverine Federal Unit

8. Well Name and No.  
**Wolverine Fed. Arapien Valley 24-1**

9. API Well No.  
**43-039-30030**

10. Field and Pool, or Exploratory Area  
**Wildcat**

11. County or Parish, State  
**Sanpete County, Utah**

12. CHECK APPROPRIATE BOX(ES) TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA

TYPE OF SUBMISSION	TYPE OF ACTION			
<input checked="" type="checkbox"/> Notice of Intent	<input type="checkbox"/> Acidize	<input type="checkbox"/> Deepen	<input type="checkbox"/> Production (Start/Resume)	<input type="checkbox"/> Water Shut-Off
<input type="checkbox"/> Subsequent Report	<input type="checkbox"/> Alter Casing	<input type="checkbox"/> Fracture Treat	<input type="checkbox"/> Reclamation	<input type="checkbox"/> Well Integrity
<input type="checkbox"/> Final Abandonment Notice	<input type="checkbox"/> Casing Repair	<input type="checkbox"/> New Construction	<input type="checkbox"/> Recomplete	<input type="checkbox"/> Other
	<input checked="" type="checkbox"/> Change Plans	<input type="checkbox"/> Plug and Abandon	<input type="checkbox"/> Temporarily Abandon	
	<input type="checkbox"/> Convert to Injection	<input type="checkbox"/> Plug Back	<input type="checkbox"/> Water Disposal	

13. Describe Proposed or Completed Operation (clearly state all pertinent details, including estimated starting date of any proposed work and approximate duration thereof. If the proposal is to deepen directionally or recompleate horizontally, give subsurface locations and measured and true vertical depths of all pertinent markers and zones. Attach the Bond under which the work will be performed or provide the Bond No. on file with BLM/BIA. Required subsequent reports shall be filed within 30 days following completion of the involved operations. If the operation results in a multiple completion or recompletion in a new interval, a Form 3160-4 shall be filed once testing has been completed. Final Abandonment Notices shall be filed only after all requirements, including reclamation, have been completed, and the operator has determined that the site is ready for final inspection.)

The original APD for this well was approved for drilling a directional hole to a total depth of 11,500'. Wolverine Oil and Gas Company of Utah, LLC now plans to drill a vertical well to a proposed depth of 16,200'. The planned drilling pad layout and well spot on the pad were changed, but the access and drilling pad location remain as approved. The drilling plan was modified to accomodate changed casing, cementing, pressure control, and H2S contingency requirements. Proposed changes to the approved APD are tabulated on the attached document.

Attachments: Survey Plat, Changes to Original Drilling Plan, Drilling Pad Layout plat, BOP Schematic, H2S Contingency Plan

**COPY**

**CONFIDENTIAL**

14. I hereby certify that the foregoing is true and correct  
Name (Printed/Typed)

**Edward Higuera**

Title **Manager - Development**

Signature

*Edward Higuera*

Date

**05/01/2006**

**THIS SPACE FOR FEDERAL OR STATE OFFICE USE**

Approved by

*Wayne A. White*

Title **Assoc Field Mgr**

Date

**25 Sept 2006**

Conditions of approval, if any (are attached) Approval of this notice does not warrant or certify that the applicant holds legal or equitable title to those rights in the subject lease which would entitle the applicant to conduct operations thereon.

Office

**Richfield Field Office**

Title 18 U.S.C. Section 1001 and Title 43 U.S.C. Section 1212, make it a crime for any person knowingly and willfully to make to any department or agency of the United States any false, fictitious or fraudulent statements or representations as to any matter within its jurisdiction.

(Instructions on page 2)



**United States Department of the Interior**  
**BUREAU OF LAND MANAGEMENT**  
**RICHFIELD FIELD OFFICE**  
150 East 900 North  
Richfield, Utah 84701



APD – REVISE BHL  
APD – REVISE DRILLING PROGRAM  
CONDITIONS OF APPROVAL

Operator: Wolverine Gas & Oil Co. of Utah, LLC.

Well: Federal #24-1  
43-039-30034  
SW¼ NW¼ Sec 24, T. 20 S., R. 1 E. SLB&M  
Sanpete County, Utah  
UTU-80907  
Wolverine Unit

- A. The majority of the original Conditions of Approval (COAs) attached to the #24-1 APD, approved April 12, 2006, remain in effect.
- B. COA #1 of the drilling plan is deleted in its entirety.

APD REQUIREMENTS FOR H<sub>2</sub>S

- 1. The authorized officer (**Al McKee**) shall be notified when operations are 500 feet above or 3 days before (whichever is earlier) drilling the first formation expected to contain H<sub>2</sub>S.
- 2. A copy of the Drilling Operations Plan (DOP) shall be available during operations at the wellsite beginning 500 feet above or 3 days before (whichever is earlier) drilling the first formation expected to contain H<sub>2</sub>S (**anticipated Kaibab Contact at ±14,680' MD**).
- 3. A Public Protection Plan (PPP) providing details of actions necessary to alert and protect the public in the event of a release of a potentially harmful volume of H<sub>2</sub>S shall be submitted to the authorized officer for drilling or producing operations when applicability criteria of Order No. 6 are met.
- 4. A copy of the PPP shall be available at the drilling and/or completion site.

5. H<sub>2</sub>S DOP and PPP shall be reviewed by the operator on an annual basis and copy of any necessary revisions shall be submitted to the authorized officer upon request.
6. If unanticipated H<sub>2</sub>S in excess of 100 ppm in the gas stream is encountered, the operator shall immediately ensure control of the well, suspend drilling operations (unless detrimental to well control), and obtain materials and safety equipment to bring the operations into compliance with the applicable provisions of Order No. 6. In addition, the operator shall notify the authorized officer of the event and the mitigating steps that have or are being taken, as soon as possible, but no later than the next business day. If said notifications are subsequent to actual resumption of drilling operations, the operator shall notify the authorized officer of the date that drilling was actually resumed. It is the operator's responsibility to provide, if necessary, a H<sub>2</sub>S DOP and a PPP to the authorized officer for approval within five business days following resumption of drilling ahead operations.

As a reminder, permit authorization contains the following **Required Notifications**:

The operator shall contact the BLM, Utah State Office, Branch of Fluid Minerals, (801) 539-4045, Cell (801) 201-7024, FAX (801) 539-4200, **at least 24 hours prior** to the following operations (Contact: **Al McKee**):

- spudding (including dry hole digger or rig hole rigs);
- running and cementing all casing strings;
- pressure testing of BOPE or any casing string.
- pressure integrity test (mud weight equivalency test) of each casing shoe.

## Attachment to Sundry Notice – Changes to Original Drilling Plan

### **Wolverine Gas and Oil Company of Utah, LLC**

#### **Change of Drilling Plans for the:**

Wolverine Federal Arapien Valley 24-1  
API No. 43-039-30030  
SW/4 NW/4 Sec. 24, T20S, R1E, SLB&M  
Sanpete County, Utah

**COPY**  
**CONFIDENTIAL**

#### Requested Change

#### Original APD

#### **Location of Well:**

At Surface: 2331' FNL, 549' FWL  
At Navajo Top: 2331' FNL, 549' FWL

2358' FNL, 696' FWL  
792' FNL, 1868' FNL

Note: See revised survey plat.

**Total Depth:** 16,200'

11,500'

#### **Casing Program:**

<u>Hole Size</u>	<u>Casing Size, Grade, Weight</u>	<u>Depth Interval</u>	<u>Hole Size</u>	<u>Casing Size, Grade, Weight</u>	<u>Depth Interval</u>
30"	24", conductor	0 – 150'	36"	30", conductor	0 – 150'
17.50"	13-3/8", J-55, 68.0#	0 – 3000'	17.50"	13-3/8", J-55, 68.0#	0 – 3500'
12.25"	9-5/8", HCP-110, 47.0#	0 – 11600'	12.25"/8.5"	7", HCP-110, 26.0#	0 – 11500'
8.50"	4-1/2", P -110, 15.1#	0 – 16200'			

Note: See attached table of minimum casing design factors.

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**Requested Change**

**Original APD**

**Cementing Program:**

<u>Casing</u>	<u>Cement Quantity, Type, Yield, and Slurry Weight</u>
13-3/8"	870 sks, CBM Lite, 4.12 ft <sup>3</sup> /sk, 10.5 ppg
	600 sks, Premium Plus, 1.19 ft <sup>3</sup> /sk, 15.6 ppg
9-5/8"	650 sks, 50:50 Poz, 1.71 ft <sup>3</sup> /sk, 13.0 ppg
4-1/2"	1250 sks, 50:50 Poz w/20% Si, 1.47 ft <sup>3</sup> /sk, 14.3 ppg

<u>Casing</u>	<u>Cement Quantity, Type, Yield, and Slurry Weight</u>
13-3/8"	1100 sks, Hi-fill, 3.86 ft <sup>3</sup> /sk, 11.0 ppg
	600 sks, Premium Plus, 1.19 ft <sup>3</sup> /sk, 15.6 ppg
7"	400 sks, 50:50 Poz, 1.21 ft <sup>3</sup> /sk, 14.35 ppg

**Elevation:** 5554' GR, 5580' KB

5560' GR

**Geologic Formations:**

<u>Formation</u>	<u>Interval-MD</u>	<u>Contents</u>
Arapien	26'(Surf) – 9425'	
Twin Creek	9425' – 9755'	W, G & O
Navajo	9755' – 11507'	W, G & O
Chinle	11507' – 12081'	W
Moenkopi	12081' – 14680'	
Kaibab	14680' – 15259'	W, G & O
Toroweap	15259' – 16200'	W
<b>Total Depth</b>	16200'	

<u>Formation</u>	<u>Interval-MD</u>	<u>Contents</u>
Arapien	Surf – 8800'	
Twin Creek	8800' – 9550'	W, G & O
Navajo	9550' – 11250'	W, G & O
Chinle	11250' – 11500'	W
<b>Total Depth</b>	11500'	

**Pressure Control Equipment:**

A 10k multi-bowl casing spool, 10k single pipe ram BOP, 10k double ram pipe and CSO BOP, 5k annular preventer, and 5k rotating head will be utilized.

The BOPE will be tested as required per BLM Onshore Order 2.

All BOPE was rated 5k and the single set of pipe rams was not included.

Note: See attached BOPE diagram.

## EXACT Engineering, Inc.

20 East Fifth St., Suite 310, Tulsa, OK 74103

www.exactengineering.com

(918) 599-9400 • (918) 599-9401 (fax)

Steven R. Hash, P.E.  
Registered Professional Engineer  
stevehash@exactengineering.com

December 1, 2007

### CONFIDENTIAL

Mr. Al McKee  
Bureau of Land Management  
Utah State Office  
P.O. Box 45155  
Salt Lake City, UT 84145-0155


Mr. Dustin Doucet  
Utah Division of Oil, Gas & Mining  
1594 West North Temple, Suite 1210  
Salt Lake City, UT 84114-5801

Re: Drilling Update #4 - **Wolverine Federal Arapien Valley 24-1**  
Sec 24 T20S R01E  
Sanpete Co, UT  
API# 43-039-30030

Gentlemen,

On behalf of Wolverine Gas and Oil Company of Utah, LLC, please find enclosed daily drilling reports for the subject well from November 19 through November 30, 2007. We are presently drilling 12-1/4" hole in Arapien shale and lime at 5794 feet. The next regularly scheduled BOPE test is December 15, 2007. We respectfully request that the enclosed information on this exploratory well remain confidential.

Sincerely,



Steven R. Hash, P.E.

Enclosures

copy without enclosures via email to:

Wolverine Gas & Oil Co of Utah, LLC: Helene Bardolph  
EXACT Engineering, Inc. well file

**RECEIVED**

**DEC 03 2007**

**DIV. OF OIL, GAS & MINING**

Petroleum Consulting, Property Management & Field Services  
complete well design, construction & management, drilling, completion, production, pipelines, appraisals,  
due diligence, acquisitions, procedures, field supervision



Operator: Wolverine Gas &amp; Oil Co of Utah, LLC

## DAILY DRILLING REPORT

24 hrs - midnight to midnight

24 hrs - midnight to midnight									
DATE	WELL	CONTRACTOR		COUNTY, STATE	SPUD DATE	API#	SUPERVISOR		
11/19/07	Wolv Fed Arapien Valley 24-1	SST #68		Sanpete, UT	11/9/07	43-039-30030	DL Naylor-R Rebsom		
DAYS F/ SPUD	PRESENT OPERATIONS @ 2400 Hour		TOTAL DEPTH	PROGRESS	DRILLING TIME	ROP	TD FORMATION	AUTH. DEPTH	
11	Drilling		3,599	272	23.50	11.57	Toroweap	16,200	

## MUD DATA

DATE/TIME	DEPTH	WT	VIS	PV	YP	GELS	FILTRATE	CAKE/32	SOLIDS	SAND	PH	CHLORIDES	CALCIUM	SALT	LCM
1/19-8:30am	3443	10.5	38	7	26	13/18	46.0	3	3.60	tr	10.4	200,000	2,200	330,000	

## BIT DATA

BIT RUN	BIT NO	SIZE	MFG.	TYPE	IADC CODE	SERIAL NO.	JETS 1/32 or TFA	IN	OUT	FOOTAGE	HOURS	ROP	MTR Y/N	RPM RT+MTR	WOB	DULL GRADING								
																IR	OR	DC	LOC	B/S	G/16	OC	REASON PLD	
3	2	####	RTC	M4249PDH	537	10349084	3x28	2017		1582	100.00	15.82	Y/N	0/140	20/40									
												#DIV/0!												
												#DIV/0!												
												#DIV/0!												

## HYDRAULICS

PUMP NO.	MANUFACTURER	LINER	STROKE LENGTH	GAL / STK 95%	SPM	GPM	AV DP	AV DC	PUMP PRESS.	MOTOR DIFF PSI	SLOW PUMP PSI			
1	Nat'l 10P130	6.0	10	3.486	110	383					DEPTH	3540		
2	Nat'l 10P130	6.0	10	3.486	110	383					SPM	60		
3						0					1	300		
											2	300		
											3			
					220	767	150	218/174	2600	200				

## DRILL STRING

BOTTOM HOLE ASSEMBLY#	4	LENGTH	O.D.	I.D.	GEOLOGIC						GENERAL INFO			
12 14 bit		1.50									RIG INFO			
Vertitrak		36.02	9.875								Co Man	435-979-2202		
Filtersub/XO		8.36	9.875	3.00							Mudlogger	435-979-6005		
12" stabilizer		5.41	8.000								Toolpusher	435-979-0544		
Float sub / Shock sub		16.22	8.000								Last BOP Test	11/15		
6 - 8" DC / XO		181.60	8.000	3.00							Next BOP Test	12/15		
6 - 6 1/2" DC		179.99	6.500	2.75							Last Safety Meeting	11/19		
2 - 5" HWDP / Jar		93.21	5.000	3.25							Last BOP Drill	11/17		
3 - 5" HWDP		89.58	5.000	3.25							Last Operate Pipe Rams	11/15		
TOTAL		611.89									Last Operate Blind Rams	11/15		
STRING WT.	BHA WT.	PU WT.	SO WT.	ROT. TORQUE	GRD. ELEVATION	GL TO KB	KB ELEVATION	SURF CSG	INT CASING 1	INT CASING 2	PROD CSG			
140	49	152	128		5,554	26	5,580	13-3/8@2017	(9-5/8"@10500)	(7-5/8"@14100)	(TD@16200)			

## SURVEYS

MD	INCL.	AZIMUTH	TVD	N+/-	E+/-	W-	SECTION	DLS	TOOL	MD	INCL.	AZIMUTH	TVD	N+/-	E+/-	W-	SECTION	DLS	TOOL

## DAILY ACTIVITY

FROM	TO	HRS	LAST 24 HOURS:
0:00	18:00	18.00	Drlg & survey 3327' to 3550'
18:00	18:30	0.50	Service rig-Top drive
18:30	0:00	5.50	Drlg & survey 3550' to 3599'
0:00			
0:00			
0:00			
0:00			No losses, seeing some sluffing & popoffs loggers indicate coming from 2867 to 2936
0:00			No excessive drag or fill on connections.
0:00			Have been saturated from 2500'
0:00			
0:00			
0:00			
0:00			
0:00			
0:00			
0:00			
0:00			
0:00			
0:00			
0:00			3668' Drilling @ 0700 hour
0:00			
Daily Total	24.00		

SEE COST DETAIL PAGE UNDER SEPARATE COVER FOR ESTIMATED DRY HOLE COSTS

Operator: Wolverine Gas &amp; Oil Co of Utah, LLC

## DAILY DRILLING REPORT

24 hrs - midnight to midnight

DATE		WELL		CONTRACTOR		COUNTY, STATE		SPUD DATE		API#		SUPERVISOR	
11/20/07		Wolv Fed Arapien Valley 24-1		SST #68		Sanpete, UT		11/9/07		43-039-30030		DL Naylor-R Rebsom	
DAYS F/ SPUD		PRESENT OPERATIONS @ 2400 Hour		TOTAL DEPTH		PROGRESS		DRILLING TIME		ROP		TD FORMATION	
12		Drilling		3,722		123		12.50		9.84		Toroweap	
												AUTH. DEPTH	
												16,200	

## MUD DATA

DATE/TIME	DEPTH	WT	VIS	PV	YP	GELS	FILTRATE	CAKE/32	SOLIDS	SAND	PH	CHLORIDES	CALCIUM	SALT	LCM
1/20-7:40am	3676	10.4+	36	8	17	11/16	44.0	3	3.50	tr	10.2	200,000	2,250	330,000	

## BIT DATA

BIT RUN	BIT NO	SIZE	MFG.	TYPE	IADC CODE	SERIAL NO.	JETS 1/32 or TFA	IN	OUT	FOOTAGE	HOURS	ROP	MTR Y/N	RPM RT+MTR	WOB	DULL GRADING							
																IR	OR	DC	LOC	B/S	G/16	OC	REASON PLD
3	2	####	RTC	M4249PDH	537	10349084	3x28	2017	3682	1681	109.00	15.42	Y.	0/140	20/40	3.0	4	WT	A	E	In		PR
4	3	####	RTC	M4249PDH	537	LD6364	3x28	3682		40	3.50	11.43	Y.	0/140	38								
													#DIV/0!										
													#DIV/0!										

## HYDRAULICS

PUMP NO.	MANUFACTURER	LINER	STROKE LENGTH	GAL / STK 95%	SPM	GPM	AV DP	AV DC	PUMP PRESS.	MOTOR DIFF PSI	SLOW PUMP PSI			
1	Nat'l 10P130	6.0	10	3.486	110	383					DEPTH	3540		
2	Nat'l 10P130	6.0	10	3.486	110	383					SPM	60		
3						0					1	300		
					220	767	150	218/174	2600	145	2	300		
											3			

## DRILL STRING

BOTTOM HOLE ASSEMBLY#	5	LENGTH	O.D.	I.D.
12 14 bit		1.50		
Vertitrak		36.02	9.875	
Filtersub/XO		8.36	9.875	3.00
12" stabilizer		5.41	8.000	
Float sub / Shock sub		16.22	8.000	
6 - 8" DC / XO		181.60	8.000	3.00
6 - 6 1/2" DC		179.99	6.500	2.75
2- 5" HWDP / Jar		93.21	5.000	3.25
3 - 5" HWDP		89.58	5.000	3.25
TOTAL		611.89		
STRING WT.	BHA WT.	PU WT.	SO WT.	ROT. TORQUE
142	49	153	129	

## GEOLOGIC

CONFIDENTIAL REPORT

## GENERAL INFO

RIG INFO	
Co Man	435-979-2202
Mudlogger	435-979-6005
Toolpusher	435-979-0544
Last BOP Test	11/15
Next BOP Test	12/15
Last Safety Meeting	11/20
Last BOP Drill	11/17
Last Operate Pipe Rams	11/15
Last Operate Blind Rams	11/20
Last Operate Annular	11/15
INT CASING 1	INT CASING 2
13-3/8@2017 (9-5/8"@10500)	(7-5/8"@14100)
	PROD CSG (TD@16200)

## SURVEYS

MD	INCL.	AZIMUTH	TVD	N+/S-	E+ / W-	SECTION	DLS	TOOL	MD	INCL.	AZIMUTH	TVD	N+/S-	E+ / W-	SECTION	DLS	TOOL

## DAILY ACTIVITY

FROM	TO	HRS	LAST 24 HOURS:
0:00	9:00	9.00	Drig & survey 3599' to 3682'
9:00	13:30	4.50	Trip out --tight from 3580' to 3204' had to pump out
13:30	16:30	3.00	Work blind rams-change bit-trip into 3308'
16:30	20:30	4.00	Wash & ream from 3308' to 3599'
20:30	0:00	3.50	Drig & survey 3682' to 3722'
0:00			
0:00			No losses, seeing some sluffing & popoffs loggers indicate coming from 2867 to 2936
0:00			No excessive drag or fill on connections.
0:00			Have been saturated from 2500'
0:00			
0:00			Mixed & pumped 2-80 bbl high vis sweeps 110 vis.
0:00			
0:00			
0:00			
0:00			
0:00			
0:00			3784' Drilling @ 0530 hour
0:00			
Daily Total		24.00	

SEE COST DETAIL PAGE UNDER SEPARATE COVER FOR ESTIMATED DRY HOLE COSTS

Operator: Wolverine Gas &amp; Oil Co of Utah, LLC

## DAILY DRILLING REPORT

24 hrs - midnight to midnight

24 hrs - midnight to midnight									
DATE	WELL		CONTRACTOR		COUNTY, STATE	SPUD DATE	API#	SUPERVISOR	
11/21/07	Wolv Fed Arapien Valley 24-1		SST #68		Sanpete, UT	11/9/07	43-039-30030	Rodger Rebsom	
DAYS F/ SPUD	PRESENT OPERATIONS @ 2400 Hour			TOTAL DEPTH	PROGRESS	DRILLING TIME	ROP	TD FORMATION	AUTH. DEPTH
13	Repair #1 mud pump			4,035	313	23.00	13.61	Toroweap	16,200

## MUD DATA

DATE/TIME	DEPTH	WT	VIS	PV	YP	GELS	FILTRATE	CAKE/32	SOLIDS	SAND	PH	CHLORIDES	CALCIUM	SALT	LCM
1/21-7:40am	3828	10.4	37	7	22	13/19	50+	3	3.25	tr	10.7	196,000	2,250	323,400	

## BIT DATA

BIT RUN	BIT NO	SIZE	MFG.	TYPE	IADC CODE	SERIAL NO.	JETS 1/32 or TFA	IN	OUT	FOOTAGE	HOURS	ROP	MTR Y/N	RPM RT+MTR	WOB	DULL GRADING								
																IR	OR	DC	LOC	B/S	G/16	OC	REASON PLD	
4	3	####	RTC	M4249PDH	537	LD6364	3x28	3682		353	26.50	13.32	Y.	0/140	38-40									
												#DIV/0!												
												#DIV/0!												
												#DIV/0!												

## HYDRAULICS

PUMP NO.	MANUFACTURER	LINER	STROKE LENGTH	GAL / STK 95%	SPM	GPM	AV DP	AV DC	PUMP PRESS.	MOTOR DIFF PSI	SLOW PUMP PSI			
1	Nat'l 10P130	6.0	10	3.486	111	387					DEPTH	3540		
2	Nat'l 10P130	6.0	10	3.486	111	387					SPM	60		
3						0					1	300		
						222	774	151	220/176	2650	150	2	300	
											3			

## DRILL STRING

BOTTOM HOLE ASSEMBLY#	5	LENGTH	O.D.	I.D.
12 14 bit		1.50		
Vertitrak		36.02	9.875	
Filtersub/XO		8.36	9.875	3.00
12" stabilizer		5.41	8.000	
Float sub / Shock sub		16.22	8.000	
6 - 8" DC / XO		181.60	8.000	3.00
6 - 6 1/2" DC		179.99	6.500	2.75
2- 5" HWDP / Jar		93.21	5.000	3.25
3 - 5" HWDP		89.58	5.000	3.25
TOTAL		611.89		
STRING WT.	BHA WT.	PU WT.	SO WT.	ROT. TORQUE
145	49	155	130	

## GEOLOGIC

CONFIDENTIAL REPORT

## GENERAL INFO

RIG INFO	
Co Man	435-979-2202
Mudlogger	435-979-6005
Toolpusher	435-979-0544
Last BOP Test	11/15
Next BOP Test	12/15
Last Safety Meeting	11/21
Last BOP Drill	11/17
Last Operate Pipe Rams	11/15
Last Operate Blind Rams	11/20
Last Operate Annular	11/15
INT CASING 2	PROD CSG
(7-5/8"@14100)	(TD@16200)

## SURVEYS

MD	INCL.	AZIMUTH	TVD	N+/-	E+/-	SECTION	DLS	TOOL	MD	INCL.	AZIMUTH	TVD	N+/-	E+/-	SECTION	DLS	TOOL

## DAILY ACTIVITY

FROM	TO	HRS	LAST 24 HOURS:
0:00	11:30	11.50	Drig & survey 3722' to 3853'
11:30	12:00	0.50	Service rig-top drive
12:00	23:30	11.50	Drig & survey 3853' to 4035'
23:30	0:00	0.50	Repair #1 mud pump
0:00			
0:00			
0:00			No losses, seeing some sluffing & popoffs loggers indicate coming from 2867 to 2936
0:00			No excessive drag or fill on connections.
0:00			Have been saturated from 2500'
0:00			
0:00			Mixed & pumped 1-80 bbl high vis sweeps 110 vis.
0:00			
0:00			
0:00			
0:00			
0:00			
0:00			
0:00			Drilling 4108' @ 0630 hour
0:00			
Daily Total		24.00	

SEE COST DETAIL PAGE UNDER SEPARATE COVER FOR ESTIMATED DRY HOLE COSTS

**24 hrs - midnight to midnight**

SEE COST DETAIL PAGE UNDER SEPARATE COVER FOR ESTIMATED DRY HOLE COSTS

Engineering and Supervision										EXACT Engineering, Inc.										(918) 599-9400 office																													
Operator: Wolverine Gas & Oil Co of Utah, LLC										DAILY DRILLING REPORT										24 hrs - midnight to midnight																													
DATE 11/23/07		WELL Wolv Fed Arapien Valley 24-1				CONTRACTOR SST #68				COUNTY, STATE Sanpete, UT		SPUD DATE 11/9/07		API# 43-039-30030		SUPERVISOR Rodger Rebsom																																	
DAYS F/SPUD 15		PRESENT OPERATIONS @ 2400 Hour Drilling				TOTAL DEPTH 4,623		PROGRESS 301		DRILLING TIME 23.50		ROP 12.81		TD FORMATION Toroweap		AUTH. DEPTH 16,200																																	
MUD DATA																																																	
DATE/TIME 1/23-9:00am		DEPTH 4434		WT 10.5		VIS 37		PV 7		YP 25		GELS 14/20		FILTRATE 50+		CAKE/32 3		SOLIDS 3.75		SAND tr		PH 10.5		CHLORIDES 200,000		CALCIUM 3,000		SALT 330,000		LOM																			
BIT DATA																																																	
BIT RUN		BIT NO		SIZE		MFG.		TYPE		IADC CODE		SERIAL NO.		JETS 1/32 or TFA		IN		OUT		FOOTAGE		HOURS		ROP		MTR Y/N		RPM RT+MTR		WOB		DULL GRADING																	
4		3		####		RTC		M4249PDH		537		LD6364		3x28		3682				941		72.50		12.98		Y.		0/140		28-40				IR		OR		DC		LOC		B/S		G/16		OC		REASON PLD	
																								#DIV/O!																									
																								#DIV/O!																									
																								#DIV/O!																									
HYDRAULICS																SLOW PUMP PSI																																	
PUMP NO.		MANUFACTURER		LINER		STROKE LENGTH		GAL / STK 95%		SPM		GPM		AV DP		AV DC		PUMP PRESS.		MOTOR DIFF PSI				DEPTH		4522																							
1		Nat'l 10P130		6.0		10		3.486		111		387												SPM		60																							
2		Nat'l 10P130		6.0		10		3.486		111		387												1		325																							
3												0												2		325																							
										222		774		151		220/176		2975		135																													
DRILL STRING																GEOLOGIC										GENERAL INFO																							
BOTTOM HOLE ASSEMBLY#		5		LENGTH		O.D.		I.D.		CONFIDENTIAL REPORT										RIG INFO																													
12 14 bit				1.50																																													
Verttrak				36.02		9.875																																											
Filtersub/XO				8.36		9.875		3.00																																									
12" stabilizer				5.41		8.000																																											
Float sub / Shock sub				16.22		8.000																																											
6 - 8" DC / XO				181.60		8.000		3.00																																									
6 - 6 1/2" DC				179.99		6.500		2.75																																									
2- 5" HWDP / Jar				93.21		5.000		3.25																																									
3 - 5" HWDP				89.58		5.000		3.25																																									
TOTAL				611.89																																													
STRING WT.		BHA WT.		PU WT.		SO WT.		ROT. TORQUE		GRD. ELEVATION		GL TO KB		KB ELEVATION		SURF CSG		INT CASING 1		INT CASING 2		PROD CSG																											
151,000		49,000		163,000		139,000				5,554		26		5,580		13-3/8@2017		(9-5/8"@10500)		(7-5/8"@14100)		(TD@16200)																											
SURVEYS																																																	
MD		INCL.		AZIMUTH		TVD		N+/-		E+/- W-		SECTION		DLS		TOOL		MD		INCL.		AZIMUTH		TVD		N+/-		E+/- W-		SECTION		DLS		TOOL															
DAILY ACTIVITY																																																	
FROM		TO		HRS		LAST 24 HOURS:																																											
0:00		15:30		15.50		Drlg & survey 4322' to 4522'																																											
15:30		16:00		0.50		Service rig-top drive																																											

Operator: Wolverine Gas &amp; Oil Co of Utah, LLC

## DAILY DRILLING REPORT

24 hrs - midnight to midnight

DATE 11/24/07	WELL Wolv Fed Arapien Valley 24-1	CONTRACTOR SST #68	COUNTY, STATE Sanpete, UT	SPUD DATE 11/9/07	API# 43-039-30030	SUPERVISOR Rodger Rebsom
DAYS P/SPUD 16	PRESENT OPERATIONS @ 2400 Hour Drilling	TOTAL DEPTH 4,970	PROGRESS 347	DRILLING TIME 23.50	ROP 14.77	TD FORMATION Toroweap
						AUTH. DEPTH 16,200

## MUD DATA

DATE/TIME 1/24-8:15ar	DEPTH 4709	WT 10.5	VIS 36	PV 8	YP 21	GELS 14/20	FILTRATE 50+	CAKE/32 3	SOLIDS 3.75	SAND tr	PH 10.3	CHLORIDES 200,000	CALCIUM 3,000	SALT 330,000	LCM	
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## BIT DATA

BIT RUN	BIT NO	SIZE	MFG.	TYPE	IADC CODE	SERIAL NO.	JETS 1/32 or TFA	IN	OUT	FOOTAGE	HOURS	ROP	MTR	RPM	WOB	DULL GRADING								
													Y/N			RT+MTR	IR	OR	DC	LOC	B/S	G/16	OC	REASON PLD
4	3	####	RTC	M4249PDH	537	LD6364	3x28	3682		1288	96.00	13.42	Y.	0/140	28-40									
													#DIV/0!											
													#DIV/0!											
													#DIV/0!											

## HYDRAULICS

PUMP NO.	MANUFACTURER	LINER	STROKE LENGTH	GAL / STK 95%	SPM	GPM	AV DP	AV DC	PUMP PRESS.	MOTOR DIFF PSI	SLOW PUMP PSI			
1	Nat'l 10P130	6.0	10	3.486	111	387					DEPTH	4764		
2	Nat'l 10P130	6.0	10	3.486	111	387					SPM	60		
3						0					1	350		
											2	350		
											3			
					222	774	151	220/176	3025	145				

## DRILL STRING

BOTTOM HOLE ASSEMBLY#	5	LENGTH	O.D.	I.D.
12 14 bit		1.50		
Vertitrak		36.02	9.875	
Filtersub/XO		8.36	9.875	3.00
12" stabilizer		5.41	8.000	
Float sub / Shock sub		16.22	8.000	
6 - 8" DC / XO		181.60	8.000	3.00
6 - 6 1/2" DC		179.99	6.500	2.75
2- 5" HWDP / Jar		93.21	5.000	3.25
3 - 5" HWDP		89.58	5.000	3.25
TOTAL		611.89		
STRING WT.	BHA WT.	PU WT.	SO WT.	ROT. TORQUE
155,000	49,000	167,000	143,000	

## GEOLOGIC

CONFIDENTIAL REPORT

## GENERAL INFO

RIG INFO	
Co Man	435-979-2202
Mudlogger	435-979-6005
Toolpusher	435-979-0544
Last BOP Test	11/15
Next BOP Test	12/15
Last Safety Meeting	11/24
Last BOP Drill	11/23
Last Operate Pipe Rams	11/23
Last Operate Blind Rams	11/20
Last Operate Annular	11/23
INT CASING 1	INT CASING 2
13-3/8@2017 (9-5/8"@10500)	(7-5/8"@14100)
PROD CSG	(TD@16200)

## SURVEYS

MD	INCL.	AZIMUTH	TVD	N+/S-	E+/W-	SECTION	DLS	TOOL	MD	INCL.	AZIMUTH	TVD	N+/S-	E+/W-	SECTION	DLS	TOOL

## DAILY ACTIVITY

FROM	TO	HRS	LAST 24 HOURS:
0:00	12:30	12.50	Drig & survey 4623' to 4764'
12:30	13:00	0.50	Service rig-top drive-repair #2 mud pump-change bow wheel side swab
13:00	0:00	11.00	Drig & survey 4764' to 4970'
0:00			
0:00			
0:00			
0:00			No losses, seeing some sluffing & popoffs loggers indicate coming from 2867 to 2936
0:00			No excessive drag or fill on connections.
0:00			Have been saturated from 2500'
0:00			
0:00			Mixed 80 bbl high vis sweep 95 vis - sweep hole @ 4735'
0:00			
0:00			
0:00			
0:00			4848' drilling break = salt section
0:00			
0:00			
0:00			Drilling 5061' @ 0630 hour
0:00			
Daily Total		24.00	

SEE COST DETAIL PAGE UNDER SEPARATE COVER FOR ESTIMATED DRY HOLE COSTS

Operator: Wolverine Gas &amp; Oil Co of Utah, LLC

## DAILY DRILLING REPORT

24 hrs - midnight to midnight

DATE 11/25/07	WELL Wolv Fed Arapien Valley 24-1	CONTRACTOR SST #68	COUNTY, STATE Sanpete, UT	SPUD DATE 11/9/07	API# 43-039-30030	SUPERVISOR Rodger Rebsom
DAYS F/SPUD 17	PRESENT OPERATIONS @ 2400 Hour Wash & Ream @ 3201	TOTAL DEPTH 5,125	PROGRESS 155	DRILLING TIME 12.00	ROP 12.92	TD FORMATION Toroweap
						AUTH. DEPTH 16,200

## MUD DATA

DATE/TIME	DEPTH	WT	VIS	PV	YP	GELS	FILTRATE	CAKE/32	SOLIDS	SAND	PH	CHLORIDES	CALCIUM	SALT	LCM
1/25-6:30am	5061	10.4+	36	7	22	14/21	50+	3	3.50	tr	10.4	200,000	3,100	330,000	

## BIT DATA

BIT RUN	BIT NO	SIZE	MFG.	TYPE	IADC CODE	SERIAL NO.	JETS 1/32 or TFA	IN	OUT	FOOTAGE	HOURS	ROP	MTR Y/N	RPM RT+MTR	WOB	DULL GRADING							
																IR	OR	DC	LOC	B/S	G/16	OC	REASON PLD
4	3	####	RTC	M4249PDH	537	LD6364	3x28	3682	5125	1443	108.00	13.36	Y.	0/140	28-40	3.0	4	WT	A	E	In		P Rate
5	4	####	RTC	MHP53DGI	537	EB4562	1X28-2X32	5125		0	0.00	#DIV/O!	Y.	0/152	5-8								Reaming
												#DIV/O!											
												#DIV/O!											

## HYDRAULICS

PUMP NO.	MANUFACTURER	LINER	STROKE LENGTH	GAL / STK 95%	SPM	GPM	AV DP	AV DC	PUMP PRESS.	MOTOR DIFF PSI	SLOW PUMP PSI			
1	Nat'l 10P130	6.0	10	3.486	111	387					DEPTH	4764		
2	Nat'l 10P130	6.0	10	3.486	111	387					SPM	60		
3						0					1	350		
					222	774	151	220/176	3050	145	2	350		
											3			

## DRILL STRING

BOTTOM HOLE ASSEMBLY#	6	LENGTH	O.D.	I.D.
12 14 bit		1.50		
Vertitrak		36.10	9.875	
Filtersub/XO		8.36	9.875	3.00
12" stabilizer		5.41	8.000	
Float sub / Shock sub		16.22	8.000	
6 - 8" DC / XO		181.60	8.000	3.00
6 - 6 1/2" DC		179.99	6.500	2.75
2 - 5" HWDP / Jar		93.21	5.000	3.25
3 - 5" HWDP		89.58	5.000	3.25
TOTAL		611.97		
STRING WT.	BHA WT.	PU WT.	SO WT.	ROT. TORQUE
157,000	49,000	168,000	145,000	

## GEOLOGIC

CONFIDENTIAL REPORT

## GENERAL INFO

RIG INFO	
Co Man	435-979-2202
Mudlogger	435-979-6005
Toolpusher	435-979-0544
Last BOP Test	11/15
Next BOP Test	12/15
Last Safety Meeting	11/25
Last BOP Drill	11/23
Last Operate Pipe Rams	11/23
Last Operate Blind Rams	11/25
Last Operate Annular	11/23
INT CASING 1	INT CASING 2
13-3/8"@2017	(9-5/8"@10500)
(7-5/8"@14100)	PROD CSG
	(TD@16200)

## SURVEYS

MD	INCL.	AZIMUTH	TVD	N+/S-	E+ / W-	SECTION	DLS	TOOL	MD	INCL.	AZIMUTH	TVD	N+/S-	E+ / W-	SECTION	DLS	TOOL

## DAILY ACTIVITY

FROM	TO	HRS	LAST 24 HOURS:
0:00	12:00	12.00	Drig & survey 4970' to 5125'
12:00	13:00	1.00	Circ. High vis sweep 98 vis. Around circ. Hole clean
13:00	19:00	6.00	Trip out-work blind rams-3907'-3888' pulled 10,000 over string wt.- 3612'-3389' pulled 25,000 over string wt.
19:00	20:30	1.50	Change out Vertitrak & bit
20:30	22:00	1.50	Trip into 2558' hit bridge
22:00	0:00	2.00	Wash & ream 2558' to 3201'- hole sluffing excess amount of thumb size cutting & flakes of running shale
0:00			Wash & ream with 2600 psi.720 gal./min 5-7000 reaming wt. 144 rpms on Mud motor with full circ. Would try to
0:00			Pack off if reaming to fast @ midnight appox. 3.5 yards of excess cutting over shakers while reaming 643'
0:00			
0:00			
0:00			Mixed 2-80 bbl high vis sweep 98 vis - sweep hole @ 5110' & 5125'
0:00			
0:00			
0:00			
0:00			
0:00			
0:00			Drilling 5134' @ 0630 hour cutting over shaker normal except for few flakes of running shale.
0:00			
Daily Total		24.00	

SEE COST DETAIL PAGE UNDER SEPARATE COVER FOR ESTIMATED DRY HOLE COSTS

Operator: Wolverine Gas &amp; Oil Co of Utah, LLC

## DAILY DRILLING REPORT

24 hrs - midnight to midnight

DATE 11/26/07	WELL Wolv Fed Arapien Valley 24-1	CONTRACTOR SST #68	COUNTY, STATE Sanpete, UT	SPUD DATE 11/9/07	API# 43-039-30030	SUPERVISOR Rodger Rebsom
DAYS F/SPUD 18	PRESENT OPERATIONS @ 2400 Hour Drilling	TOTAL DEPTH 5,310	PROGRESS 185	DRILLING TIME 18.00	ROP 10.28	TD FORMATION Toroweap
						AUTH. DEPTH 16,200

## MUD DATA

DATE/TIME 1/25-6:30am	DEPTH 5148	WT 10.4+	VIS 41	PV 9	YP 29	GELS 17/22	FILTRATE 60+	CAKE/32 3	SOLIDS 3.50	SAND tr	PH 10.4	CHLORIDES 200,000	CALCIUM 3,100	SALT 330,000	LOM
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## BIT DATA

BIT RUN	BIT NO	SIZE	MFG.	TYPE	IADC CODE	SERIAL NO.	JETS 1/32 or TFA	IN	OUT	FOOTAGE	HOURS	ROP	MTR Y/N	RPM RT+MTR	WOB	DULL GRADING							
																IR	OR	DC	LOC	B/S	G/16	OC	REASON PLD
4	3	####	RTC	M4249PDH	537	LD6364	3x28	3682	5125	1443	108.00	13.36	Y.	0/140	28-40	3.0	4	WT	A	E	In		P Rate
5	4	####	RTC	MHP53DGI	537	EB4562	1X28-2X32	5125		185	18.00	10.28	Y.	0/152	20-35								
												#DIV/0!											
												#DIV/0!											

## HYDRAULICS

PUMP NO.	MANUFACTURER	LINER	STROKE LENGTH	GAL / STK 95%	SPM	GPM	AV DP	AV DC	PUMP PRESS.	MOTOR DIFF PSI	SLOW PUMP PSI			
1	Nat'l 10P130	6.0	10	3.486	111	387					DEPTH	5167		
2	Nat'l 10P130	6.0	10	3.486	111	387					SPM	60		
3						0					1	355		
					222	774	151	220/176	3025	125	2	360		
											3			

## DRILL STRING

BOTTOM HOLE ASSEMBLY#	6	LENGTH	O.D.	I.D.
12 14 bit		1.50		
Vertitrak		36.10	9.875	
Filtersub/XO		8.36	9.875	3.00
12" stabilizer		5.41	8.000	
Float sub / Shock sub		16.22	8.000	
6 - 8" DC / XO		181.60	8.000	3.00
6 - 6 1/2" DC		179.99	6.500	2.75
2- 5" HWDP / Jar		93.21	5.000	3.25
3 - 5" HWDP		89.58	5.000	3.25
TOTAL		611.97		
STRING WT.	BHA WT.	PU WT.	SO WT.	ROT. TORQUE
159,000	49,000	170,000	147,000	

## GEOLOGIC

CONFIDENTIAL REPORT

## GENERAL INFO

RIG INFO	
Co Man	435-979-2202
Mudlogger	435-979-6005
Toolpusher	435-979-0544
Last BOP Test	11/15
Next BOP Test	12/15
Last Safety Meeting	11/26
Last BOP Drill	11/23
Last Operate Pipe Rams	11/23
Last Operate Blind Rams	11/25
Last Operate Annular	11/23
INT CASING 1	INT CASING 2
13-3/8@2017 (9-5/8"@10500)	(7-5/8"@14100)
	PROD CSG (TD@16200)

## SURVEYS

MD	INCL.	AZIMUTH	TVD	N+/S-	E+ / W-	SECTION	DLS	TOOL	MD	INCL.	AZIMUTH	TVD	N+/S-	E+ / W-	SECTION	DLS	TOOL

## DAILY ACTIVITY

FROM	TO	HRS	LAST 24 HOURS:
0:00	4:30	4.50	Wash & ream 3201' to 3325' - trip into 3710' - ream 3710' to 4213' - trip in 4213' to 5064' - ream 5064' to 5125'-20'
4:30	5:30	1.00	Circ. 80 bbl. High vis sweep 98 vis. Around circ. Hole clean
5:30	10:30	5.00	Drill & survey 5125' to 5167'
10:30	11:00	0.50	Service rig-top drive
11:00	0:00	13.00	Drill & survey 5167' to 5310'
0:00			
0:00			
0:00			
0:00			
0:00			
0:00			
0:00			Mixed 3-80 bbl high vis sweep 90 vis - sweep hole @ 5125'-5148'-5296'
0:00			Very few extra cutting came back with last sweep @ 5296'
0:00			Cutting over shaker are normal except for very few flakes from running shale.
0:00			
0:00			
0:00			Pulser not working on Vertitrak
0:00			
0:00			Drilling 5330' @ 0200 hour.
0:00			
Daily Total	24.00		

SEE COST DETAIL PAGE UNDER SEPARATE COVER FOR ESTIMATED DRY HOLE COSTS



Engineering and Supervision										EXACT Engineering, Inc.										(918) 599-9400 office																																					
Operator: Wolverine Gas & Oil Co of Utah, LLC										DAILY DRILLING REPORT										24 hrs - midnight to midnight																																					
DATE 11/27/07			WELL Wolv Fed Arapien Valley 24-1			CONTRACTOR SST #68			COUNTY, STATE Sanpete, UT			SPUD DATE 11/9/07			API# 43-039-30030			SUPERVISOR Rodger Rebsom																																							
DAYS F/ SPUD 19			PRESENT OPERATIONS @ 2400 Hour Drilling			TOTAL DEPTH 5,534			PROGRESS 224			DRILLING TIME 22.50			ROP 9.96			TD FORMATION Toroweap			AUTH. DEPTH 16,200																																				
MUD DATA																																																									
DATE/TIME 1/27-6:30ar		DEPTH 5375		WT 10.5		VIS 42		PV 1		YP 29		GELS 17/22		FILTRATE 60+		CAKE/32 3		SOLIDS 3.75		SAND tr		PH 10.3		CHLORIDES 200,000		CALCIUM 3,100		SALT 330,000		LCM																											
BIT DATA																																																									
BIT RUN		BIT NO		SIZE		MFG.		TYPE		IADC CODE		SERIAL NO.		JETS 1/32 or TFA		IN		OUT		FOOTAGE		HOURS		ROP		MTR Y/N		RPM RT+MTR		WOB		DULL GRADING		IR		OR		DC		LOC		B/S		G/16		OC		REASON PLD									
5		4		####		RTC		MHP53DGI		537		EB4562		1X28-2/32		5125				409		40.50		10.10		Y.		0/140		20-35																											
																								#DIV/0!																																	
																								#DIV/0!																																	
																								#DIV/0!																																	
HYDRAULICS																								SLOW PUMP PSI																																	
PUMP NO.		MANUFACTURER				LINER		STROKE LENGTH		GAL / STK 95%		SPM		GPM		AV DP		AV DC		PUMP PRESS.		MOTOR DIFF PSI				DEPTH		5167																													
1		Nat'l 10P130				6.0		10		3.486		100		349														1		355																											
2		Nat'l 10P130				6.0		10		3.486		100		349														2		360																											
3														0														3																													
												200		697		137		198/158		2725		75																																			
DRILL STRING												GEOLOGIC												GENERAL INFO																																	
BOTTOM HOLE ASSEMBLY# 6												LENGTH												O.D.												I.D.												RIG INFO									
12 14 bit												1.50																																				Co Man 435-979-2202									
Vertitak												36.10												9.875																								Mudlogger 435-979-6005									
Filtersub/XO												8.36												9.875												3.00												Toolpusher 435-979-0544									
12" stabilizer												5.41												8.000																								Last BOP Test 11/15									
Float sub / Shock sub												16.22												8.000																								Next BOP Test 12/15									
6 - 8" DC / XO												181.60												8.000												3.00												Last Safety Meeting 11/27									
6 - 6 1/2" DC												179.99												6.500												2.75												Last BOP Drill 11/23									
2- 5" HWDP / Jar												93.21												5.000												3.25												Last Operate Pipe Rams 11/23									
3 - 5" HWDP												89.58												5.000												3.25												Last Operate Blind Rams 11/25									
TOTAL												611.97																																				Last Operate Annular 11/23									
STRING WT.				BHA WT.				PU WT.				SO WT.				ROT. TORQUE				GRD. ELEVATION				GL TO KB				KB ELEVATION				SURF CSG				INT CASING 1				INT CASING 2				PROD CSG													
163,000				49,000				175,000				150,000								5,554				26				5,580				13-3/8@2017				(9-5/8"@10500)				(7-5/8"@14100)				(TD@16200)													
SURVEYS																																																									
MD		INCL.		AZIMUTH		TVD		N+/-		E+/-		SECTION		DLS		TOOL		MD		INCL.																																					

Operator: Wolverine Gas &amp; Oil Co of Utah, LLC

## DAILY DRILLING REPORT

24 hrs - midnight to midnight

DATE 11/28/07	WELL Wolv Fed Arapien Valley 24-1	CONTRACTOR SST #68	COUNTY, STATE Sanpete, UT	SPUD DATE 11/9/07	API# 43-039-30030	SUPERVISOR Rodger Rebsom
DAYS F/SPUD 20	PRESENT OPERATIONS @ 2400 Hour Drilling	TOTAL DEPTH 5,591	PROGRESS 57	DRILLING TIME 10.00	ROP 5.70	TD FORMATION Toroweap
						AUTH. DEPTH 16,200

## MUD DATA

DATE/TIME	DEPTH	WT	VIS	PV	YP	GELS	FILTRATE	CAKE/32	SOLIDS	SAND	PH	CHLORIDES	CALCIUM	SALT	LCM
1/28-6:30am	5548	10.5	41	10	26	17/22	60+	3	3.75	tr	10.3	200,000	3,100	330,000	

## BIT DATA

BIT RUN	BIT NO	SIZE	MFG.	TYPE	IADC CODE	SERIAL NO.	JETS 1/32 or TFA	IN	OUT	FOOTAGE	HOURS	ROP	MTR Y/N	RPM RT+MTR	WOB	DULL GRADING	IR	OR	DC	LOC	B/S	G/16	OC	REASON PLD
5	4	####	RTC	MHP53DGI	537	EB4562	1X28-2/32	5125	5545	420	42.00	10.00	Y.	0/140	20-35	2.0	2	WT	A	E	In			Change Ver
6	5	####	Hycalo	DSX178		22179	8x15	5545		51	8.50	6.00	Y.	0/140	10-20									
													#DIV/0!											
													#DIV/0!											

## HYDRAULICS

PUMP NO.	MANUFACTURER	LINER	STROKE LENGTH	GAL / STK 95%	SPM	GPM	AV DP	AV DC	PUMP PRESS.	MOTOR DIFF PSI	DEPTH	5548		
1	Nat'l 10P130	6.0	10	3.486	100	349					1	365		
2	Nat'l 10P130	6.0	10	3.486	100	349					2	365		
3						0					3			
					200	697	137	198/158	2725	75				

## SLOW PUMP PSI

## DRILL STRING

BOTTOM HOLE ASSEMBLY#	7	LENGTH	O.D.	I.D.
12 14 bit		1.50		
Vertitak		36.03	9.875	
Filtersub/XO		8.36	9.875	3.00
12" stabilizer		5.41	8.000	
Float sub / Shock sub		16.22	8.000	
6 - 8" DC / XO		181.60	8.000	3.00
6 - 6 1/2" DC		179.99	6.500	2.75
2 - 5" HWDP / Jar		93.21	5.000	3.25
3 - 5" HWDP		89.58	5.000	3.25
TOTAL		611.90		
STRING WT.	BHA WT.	PU WT.	SO WT.	ROT. TORQUE
168,000	49,000	178,000	153,000	

## GEOLOGIC

CONFIDENTIAL REPORT

## GENERAL INFO

RIG INFO	
Co Man	435-979-2202
Mudlogger	435-979-6005
Toolpusher	435-979-0544
Last BOP Test	11/15
Next BOP Test	12/15
Last Safety Meeting	11/28
Last BOP Drill	11/23
Last Operate Pipe Rams	11/23
Last Operate Blind Rams	11/28
Last Operate Annular	11/23

GRD. ELEVATION	GL TO KB	KB ELEVATION	SURF CSG	INT CASING 1	INT CASING 2	PROD CSG
5,554	26	5,580	13-3/8@2017	(9-5/8"@10500)	(7-5/8"@14100)	(TD@16200)

## SURVEYS

MD	INCL.	AZIMUTH	TVD	N+/S-	E+/W-	SECTION	DLS	TOOL	MD	INCL.	AZIMUTH	TVD	N+/S-	E+/W-	SECTION	DLS	TOOL

## DAILY ACTIVITY

FROM	TO	HRS	LAST 24 HOURS:
0:00	1:30	1.50	Drill 5534' to 5545'
1:30	2:30	1.00	Circ. Clean hole
2:30	7:00	4.50	Drill & survey 5365' to 5534'
7:00	8:30	1.50	Work blinds rams-change Vertitak-bit
8:30	12:00	3.50	Trip into 5365'
12:00	13:30	1.50	Wash & ream 5365' to 5545' - 31' fill
13:30	15:30	2.00	Circ. 2- High vis sweeps 98 vis getting quarter to half dollar size cutting over shaker circ. Hole clean
15:30	0:00	8.50	Drill & survey 5545' to 5591'
0:00			
0:00			
0:00			Mixed 2-80 bbl high vis sweep 98 vis - sweep hole @ 5545'
0:00			Circ. Appox. 2 yards of over sized cutting over shakers after reaming to bottom
0:00			
0:00			
0:00			
0:00			
0:00			
0:00			5642' Drilling @ 0730 hour
0:00			
Daily Total		24.00	

SEE COST DETAIL PAGE UNDER SEPARATE COVER FOR ESTIMATED DRY HOLE COSTS

Engineering and Supervision

## EXACT Engineering, Inc.

(918) 599-9400 office

Operator: Wolverine Gas &amp; Oil Co of Utah, LLC

## DAILY DRILLING REPORT

24 hrs - midnight to midnight

DATE	WELL	CONTRACTOR	COUNTY, STATE	SPUD DATE	API#	SUPERVISOR	
11/29/07	Wolv Fed Arapien Valley 24-1	SST #68	Sanpete, UT	11/9/07	43-039-30030	Rodger Rebsom	
DAYS F/ SPUD	PRESENT OPERATIONS @ 2400 Hour	TOTAL DEPTH	PROGRESS	DRILLING TIME	ROP	TD FORMATION	AUTH. DEPTH
21	Drilling	5,688	97	23.00	4.22	Toroweap	16,200

## MUD DATA

DATE/TIME	DEPTH	WT	VIS	PV	YP	GELS	FILTRATE	CAKE/32	SOLIDS	SAND	PH	CHLORIDES	CALCIUM	SALT	LCM
1/29-8:00am	5637	10.5	48	11	40	23/28	60+	3	3.75	tr	10.3	200,000	3,100	330,000	

## BIT DATA

BIT RUN	BIT NO	SIZE	MFG.	TYPE	IADC CODE	SERIAL NO.	JETS 1/32 or TFA	IN	OUT	FOOTAGE	HOURS	ROP	MTR Y/N	RPM RT-MTR	WOB	DULL GRADING									
																IR	OR	DC	LOC	B/S	G/16	OC	REASON PLD		
5	4	####	RTC	MHP53DGI	537	EB4562	1X28-2/32	5125	5545	420	42.00	10.00	Y.	0/140	20-35	2.0	2	WT	A	E	In		Change Ver		
6	5	####	Hycalo	DSX178		22179	8x15	5545		148	31.50	4.70	Y.	0/140	10-20										
												#DIV/0!													
												#DIV/0!													

## HYDRAULICS

PUMP NO.	MANUFACTURER	LINER	STROKE LENGTH	GAL / STK 95%	SPM	GPM	AV DP	AV DC	PUMP PRESS.	MOTOR DIFF PSI	SLOW PUMP PSI				
											DEPTH				
1	Nat'l 10P130	6.0	10	3.486	100	349						1	5548		
2	Nat'l 10P130	6.0	10	3.486	100	349						2	365		
3						0						3	365		
					200	697	137	198/158	2725	75					

## DRILL STRING

BOTTOM HOLE ASSEMBLY#	7	LENGTH	O.D.	I.D.
12 14 bit		1.50		
Vertitrak		36.03	9.875	
Filtersub/XO		8.36	9.875	3.00
12" stabilizer		5.41	8.000	
Float sub / Shock sub		16.22	8.000	
6 - 8" DC / XO		181.60	8.000	3.00
6 - 6 1/2" DC		179.99	6.500	2.75
2 - 5" HWDP / Jar		93.21	5.000	3.25
3 - 5" HWDP		89.58	5.000	3.25
TOTAL		611.90		
STRING WT.	BHA WT.	PU WT.	SO WT.	ROT. TORQUE
168,000	49,000	178,000	153,000	

## GEOLOGIC

CONFIDENTIAL REPORT

## GENERAL INFO

RIG INFO	
Co Man	435-979-2202
Mudlogger	435-979-6005
Toolpusher	435-979-0544
Last BOP Test	11/15
Next BOP Test	12/15
Last Safety Meeting	11/29
Last BOP Drill	11/23
Last Operate Pipe Rams	11/23
Last Operate Blind Rams	11/28
Last Operate Annular	11/23
INT CASING 2	PROD CSG
(7-5/8"@14100)	(TD@16200)

## SURVEYS

MD	INCL.	AZIMUTH	TVD	N+/S-	E+ / W-	SECTION	DLS	TOOL	MD	INCL.	AZIMUTH	TVD	N+/S-	E+ / W-	SECTION	DLS	TOOL

## DAILY ACTIVITY

FROM	TO	HRS	LAST 24 HOURS:
0:00	15:30	15.50	Drill 5591' to 5673'
15:30	16:30	1.00	Service rig-top drive - change liner & swab #2 mud pump
16:30	0:00	7.50	Drill 5673' to 5688'
0:00			
0:00			
0:00			
0:00			
0:00			
0:00			
0:00			Mixed 1-50 bbl 95 vis. Sweep hole @ 5674'
0:00			Brought back very few extra cutting
0:00			
0:00			
0:00			
0:00			
0:00			
0:00			
0:00			
0:00			
0:00			5692' trip out @ 0400 hour.
0:00			
Daily Total	24.00		

SEE COST DETAIL PAGE UNDER SEPARATE COVER FOR ESTIMATED DRY HOLE COSTS

Operator: Wolverine Gas &amp; Oil Co of Utah, LLC

## DAILY DRILLING REPORT

24 hrs - midnight to midnight

DATE 11/30/07	WELL Wolv Fed Arapien Valley 24-1	CONTRACTOR SST #68	COUNTY, STATE Sanpete, UT	SPUD DATE 11/9/07	API# 43-039-30030	SUPERVISOR Rodger Rebsom
DAYS F/ SPUD 22	PRESENT OPERATIONS @ 2400 Hour Drilling	TOTAL DEPTH 5,794	PROGRESS 106	DRILLING TIME 15.50	ROP 6.84	TD FORMATION Toroweap
						AUTH. DEPTH 16,200

## MUD DATA

DATE/TIME	DEPTH	WT	VIS	PV	YP	GELS	FILTRATE	CAKE/32	SOLIDS	SAND	PH	CHLORIDES	CALCIUM	SALT	LCM
1/30-8:00am	5692	10.5	42	9	42	20/26	60+	3	3.75	tr	10.5	200,000	3,100	330,000	

## BIT DATA

BIT RUN	BIT NO	SIZE	MFG.	TYPE	IADC CODE	SERIAL NO.	JETS 1/32 or TFA	IN	OUT	FOOTAGE	HOURS	ROP	MTR Y/N	RPM RT+MTR	WOB	DULL GRADING									
																IR	OR	DC	LOC	B/S	G/16	OC	REASON PLD		
5	4	####	RTC	MHP53DG	537	EB4562	1X28-2/32	5125	5545	420	42.00	10.00	Y.	0/140	20-35	2.0	2	WT	A	E	In	Change Ver			
6	5	####	Hycalo	DSX178		22179	8x15	5545	5692	152	34.50	4.41	Y.	0/140	10-20	2.0	4	WT	O		In	P Rate			
7	6	####	RTC	HP 43A	437	B73501	3X32.	5692		102	12.50	8.16	Y.	0/140	30-35										
												#DIV/0!													

## HYDRAULICS

PUMP NO.	MANUFACTURER	LINER	STROKE LENGTH	GAL / STK 95%	SPM	GPM	AV DP	AV DC	PUMP PRESS.	MOTOR DIFF PSI	DEPTH	5548		
1	Nat'l 10P130	6.0	10	3.486	110	383					1	365		
2	Nat'l 10P130	6.0	10	3.486	110	383					2	365		
3						0					3			
					220	767	150	218/174	2775	75				

## SLOW PUMP PSI

DRILL STRING					GEOLOGIC					GENERAL INFO			
BOTTOM HOLE ASSEMBLY#	8	LENGTH	O.D.	I.D.	CONFIDENTIAL REPORT					RIG INFO			
12 14 bit		1.50								Co Man		435-979-2202	
Vertitrak		36.03	9.875							Mudlogger		435-979-6005	
Filtersub/XO		8.36	9.875	3.00						Toolpusher		435-979-0544	
12" stabilizer		5.41	8.000							Last BOP Test		11/15	
Float sub / Shock sub		16.22	8.000							Next BOP Test		12/15	
6 - 8" DC / XO		181.60	8.000	3.00						Last Safety Meeting		11/30	
6 - 6 1/2" DC		179.99	6.500	2.75						Last BOP Drill		11/30	
2- 5" HWDP / Jar		93.21	5.000	3.25						Last Operate Pipe Rams		11/23	
3 - 5" HWDP		89.58	5.000	3.25						Last Operate Blind Rams		11/30	
TOTAL		611.90			Last Operate Annular		11/30						
STRING WT.	BHA WT.	PU WT.	SO WT.	ROT. TORQUE	GRD. ELEVATION	GL TO KB	KB ELEVATION	SURF CSG	INT CASING 1	INT CASING 2	PROD CSG		
170,000	49,000	181,000	158,000		5,554	26	5,580	13-3/8@2017	(9-5/8"@10500)	(7-5/8"@14100)	(TD@16200)		

## SURVEYS

MD	INCL.	AZIMUTH	TVD	N+/S-	E+ / W-	SECTION	DLS	TOOL	MD	INCL.	AZIMUTH	TVD	N+/S-	E+ / W-	SECTION	DLS	TOOL

## DAILY ACTIVITY

FROM	TO	HRS	LAST 24 HOURS:
0:00	3:00	3.00	Drill 5688' to 5692'
3:00	7:00	4.00	Trip out change bit work blind rams
7:00	10:00	3.00	Trip into 5552'
10:00	10:30	0.50	Wash & ream 5552' to 5692' - 17' fill
10:30	13:30	3.00	Drill & survey 5692' to 5710'
13:30	14:30	1.00	Service rig-top drive-repair #1 mud pump change valve & seat
14:30	0:00	9.50	Drill & survey 5710' to 5788'
0:00			
0:00			
0:00			Mixed 1-80 bbl 95 vis. Sweep hole @ 5692'
0:00			Brought back 2 yards of extra cutting
0:00			
0:00			
0:00			
0:00			
0:00			
0:00			
0:00			
0:00			5895' Drilling @ 0600 hour
0:00			
Daily Total		24.00	

SEE COST DETAIL PAGE UNDER SEPARATE COVER FOR ESTIMATED DRY HOLE COSTS

## NOTICE

Utah Oil and Gas Conservation General Rule R649-3-21 states that,

- A well is considered completed when the well has been adequately worked to be capable of producing oil or gas or when well testing as required by the division is concluded.
- Within 30 days after the completion or plugging of a well, the following shall be filed:
  - Form 8, Well Completion or Recompletion Report and Log
  - A copy of electric and radioactivity logs, if run
  - A copy of drillstem test reports,
  - A copy of formation water analyses, porosity, permeability or fluid saturation determinations
  - A copy of core analyses, and lithologic logs or sample descriptions if compiled
  - A copy of directional, deviation, and/or measurement-while-drilling survey for each horizontal well

Failure to submit reports in a timely manner will result in the issuance of a Notice of Violation by the Division of Oil, Gas and Mining, and may result in the Division pursuing enforcement action as outlined in Rule R649-10, Administrative Procedures, and Section 40-6-11 of the Utah Code.

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As of the mailing of this notice, the division has not received the required reports for

Operator: Wolverine Gas & Oil Co UT Today's Date: 02/14/2008

Well:	API Number:	Drilling Commenced:
Wolverine Fed 17-8 drlg rpts/wcr	4304130047	06/16/2007
Wolverine Fed 17-9 drlg rpts/wcr	4304130049	06/16/2007
Wov Fed Arapien Vly 24-1 drlg rpts/wcr	4303930030	10/03/2007

2DS 1E 24

To avoid compliance action, required reports should be mailed within 7 business days to:

Utah Division of Oil, Gas and Mining  
1594 West North Temple, Suite 1210  
P.O. Box 145801  
Salt Lake City, Utah 84114-5801

If you have questions or concerns regarding this matter, please call (801) 538-5284.

cc: Well File  
Compliance File

24 hrs - midnight to midnight

DATE	WELL	CONTRACTOR	COUNTY, STATE	SPUD DATE	API#	SUPERVISOR	
01/25/08	Wolv Fed Arapien Valley 24-1	SST #68	Sanpete, UT	11/9/07	43-039-30030	DL Naylor- RD Rebsom	
DAYS F/ SPUD	PRESENT OPERATIONS @ 2400 Hour	TOTAL DEPTH	PROGRESS	DRILLING TIME	ROP	TD FORMATION	AUTH. DEPTH
78	Drilling	10,801	131	18.50	7.08	Toroweap	16,200

## MUD DATA

DATE/TIME	DEPTH	WT	VIS	PV	YP	GELS	FILTRATE	CAKE/32	SOLIDS	SAND	PH	CHLORIDES	CALCIUM	SALT	LCM	
/25/12:30pm	10738	8.4	45	14	16	6/9	8.2	1	1.00	tr	9.5	10,250	320			

## BIT DATA

[illegible]

## HYDRAULICS

PUMP NO.	MANUFACTURER	LINER	STROKE LENGTH	GAL / STK 95%	SPM	GPM	AV DP	AV DC	PUMP PRESS.	MOTOR DIFF PSI		DEPTH	10670			
												SPM	60			
1	Nat'l 10P130	5.5	10	2.94	120	353						1	500			
2	Nat'l 10P130	5.5	10	2.94	0	0						2	500			
3						0						3				
					120	353	148	148	1800	200						

**SLOW PUMP PSI**

DEPTH	10670		
SPM	60		
1	500		
2	500		
3			

## DRILL STRING

BOTTOM HOLE ASSEMBLY#	26	LENGTH	O.D.	I.D.
8 1/2" bit		1.00	8.500	
Vertitrak (motor)		30.80	7.063	
Float sub		2.45	6.750	2.81
Filter sub		5.16	6.375	3.00
Shock sub		10.48	6.625	2.00
26 - 5" spiral wt.		795.40	5.000	3.00
Jar		32.62	6.500	2.75
4 - 5" spiral wt		120.95	5.000	3.00
TOTAL		998.86		

## GEOLOGIC

**CONFIDENTIAL REPORT**

## GENERAL INFO

RIG INFO	
Co Man	435-979-2202
Mudlogger	435-979-6005
Toolpusher	435-979-0544
Last BOP Test	1/22
Next BOP Test	2/21
Last Safety Meeting	1/22
Last BOP Drill	1/22
Last Operate Pipe Rams	1/22
Last Operate Blind Rams	1/22
Last Operate Annular	1/22

STRING WT.	BHA WT.	PU WT.	SO WT.	ROT. TORQUE	GRD. ELEVATION	GL TO KB	KB ELEVATION	SURF CSG	INT CASING 1	INT CASING 2	PROD CSG
250	48	280	240		5,554	26	5,580	13-3/8@2017	9-5/8"@10372	(7-5/8"@14100)	(TD@16200)

## SURVEYS

[illegible]

### DAILY ACTIVITY

FROM	TO	HRS	LAST 24 HOURS:
0:00	1:30	1.50	W&R 10600 to 10670, taking 8 to 10k wt. & 30k overpull
1:30	8:00	6.50	Drill & survey 10670 to 10718
8:00	9:00	1.00	W&R 10718 up to 10650, up to 70k overpull & taking 10k to ream.
9:00	17:00	8.00	Drill & survey 10718 to 10768, rough fractured drilling, having to pu & restart every 10 to 15', ribs off
17:00	20:00	3.00	W&R 10768 up to 10710, up to 80k overpull & 10-15k to ream, toughest reaming 10690 to 10710
20:00	0:00	4.00	Drill & survey 10768 to 10800, rough fractured drilling, pu & restart every 10-15', ribs off.
0:00			
0:00			
0:00			
0:00			
0:00			
0:00			
0:00			
0:00			
0:00			
0:00			
0:00			This am drilling @ 10830, still rough fractured drilling, no mud losses.
0:00			
0:00			Hole has stabilized some & is acting better. Will make a wiper trip this am.
0:00			
0:00			
Daily Total		24.00	

**SEE COST DETAIL PAGE UNDER SEPARATE COVER FOR ESTIMATED DRY HOLE COSTS**

Engineering and Supervision

## EXACT Engineering, Inc.

(918) 599-9400 office

Operator: Wolverine Gas &amp; Oil Co of Utah, LLC

## DAILY DRILLING REPORT

24 hrs - midnight to midnight

DATE	WELL	CONTRACTOR	COUNTY, STATE	SPUD DATE	API#	SUPERVISOR	
01/26/08	Wolv Fed Arapien Valley 24-1	SST #68	Sanpete, UT	11/9/07	43-039-30030	DL Naylor- RD Rebsom	
DAYS F/ SPUD	PRESENT OPERATIONS @ 2400 Hour	TOTAL DEPTH	PROGRESS	DRILLING TIME	ROP	TD FORMATION	AUTH. DEPTH
79	Drilling	10,931	130	15.50	8.39	Toroweap	16,200

## MUD DATA

DATE/TIME	DEPTH	WT	VIS	PV	YP	GELS	FILTRATE	CAKE/32	SOLIDS	SAND	PH	CHLORIDES	CALCIUM	SALT	LCM
1/26/8:am	10853	8.4	57	19	24	10/13	8.0	1	1.00	tr	10.0	10,200	340		

## BIT DATA

BIT RUN	BIT NO	SIZE	MFG.	TYPE	IADC CODE	SERIAL NO.	JETS 1/32 or TFA	IN	OUT	FOOTAGE	HOURS	ROP	MTR Y/N	RPM RT+MTR	WOB	DULL GRADING									
																IR	OR	DC	LOC	B/S	G/16	OC	REASON PLD		
23	19	8.500	STC	H30ODVP	537H	PG2682	3x12	10390	10670	280	21.50	13.02	Y	0-70	28	4.0	5	WT	A	4/E	I	BT	MWD quit		
24	20	8.500	STC	H35ODVP	547H	PF9138	3x13	10670		261	34.00	7.68	Y	0-70	20-35										
												#DIV/0!													
												#DIV/0!													

## HYDRAULICS

PUMP NO.	MANUFACTURER	LINER	STROKE LENGTH	GAL / STK 95%	SPM	GPM	AV DP	AV DC	PUMP PRESS.	MOTOR DIFF PSI	DEPTH
1	Nat'l 10P130	5.5	10	2.94	120	353					10816
2	Nat'l 10P130	5.5	10	2.94	0	0					65
3					0						600
					120	353	148	148	1800	200	600

## SLOW PUMP PSI

DRILL STRING					GEOLOGIC								GENERAL INFO			
BOTTOM HOLE ASSEMBLY#	26	LENGTH	O.D.	I.D.	CONFIDENTIAL REPORT								RIG INFO			
8 1/2" bit		1.00	8.500										Co Man	435-979-2202		
Vertitrak (motor)		30.80	7.063										Mudlogger	435-979-6005		
Float sub		2.45	6.750	2.81									Toolpusher	435-979-0544		
Filter sub		5.16	6.375	3.00									Last BOP Test	1/22		
Shock sub		10.48	6.625	2.00									Next BOP Test	2/21		
26 - 5" spiral wt.		795.40	5.000	3.00									Last Safety Meeting	1/22		
Jar		32.62	6.500	2.75									Last BOP Drill	1/22		
4 - 5" spiral wt		120.95	5.000	3.00									Last Operate Pipe Rams	1/22		
													Last Operate Blind Rams	1/22		
													Last Operate Annular	1/22		
TOTAL		998.86														
STRING WT.	BHA WT.	PU WT.	SO WT.	ROT. TORQUE	GRD. ELEVATION	GL TO KB	KB ELEVATION	SURF CSG	INT CASING 1	INT CASING 2	PROD CSG					
250	48	265	245		5,554	26	5,580	13-3/8@2017	9-5/8"@10372	(7-5/8"@14100)	(TD@16200)					

## SURVEYS

MD	INCL.	AZIMUTH	TVD	N-/S-	E-/W-	SECTION	DLS	TOOL	MD	INCL.	AZIMUTH	TVD	N-/S-	E-/W-	SECTION	DLS	TOOL

## DAILY ACTIVITY

FROM	TO	HRS	LAST 24 HOURS:
0:00	1:30	1.50	Drill 10800 to 10816, rough fractured drilling, pu & restart every 10-15', ribs off.
1:30	2:30	1.00	W&R 10816 up to 10775, 50k overpull & taking 10k to ream.
2:30	8:00	5.50	Drill 10816 to 10853, hole has relaxed to 25k overpull & 2-4k reaming
8:00	9:00	1.00	Wiper trip to shoe. Had to pump & wash to 10540
9:00	9:30	0.50	Rig service
9:30	10:00	0.50	TIH to 10550
10:00	15:00	5.00	W&R 10550 to 10853, tough reaming 10595 to 10602, pulled up thu w/ 5k overpull, then ream w/10k.
15:00	23:00	8.00	Drill & survey 10853 to 10924, drag & torque more normal.
23:00	23:30	0.50	W&R 10924 up to 10906, 25k drag 2-6k reaming, hole looking better.
23:30	0:00	0.50	Drill 10924 to 10931
0:00			
0:00			
0:00			Pumped 100 vis sweep after trip, normal returns
0:00			
0:00			
0:00			
0:00			This am drilling @ 11000
0:00			
0:00			
Daily Total		24.00	

SEE COST DETAIL PAGE UNDER SEPARATE COVER FOR ESTIMATED DRY HOLE COSTS

**24 hrs - midnight to midnight**

SEE COST DETAIL PAGE UNDER SEPARATE COVER FOR ESTIMATED DRY HOLE COSTS



**24 hrs - midnight to midnight**

## MUD DATA

## BIT DATA

## HYDRAULICS

**SLOW PUMP PSI**

## DRILL STRING

## GEOLOGIC

## GENERAL INFO

**CONFIDENTIAL REPORT**

### DAILY ACTIVITY

**SEE COST DETAIL PAGE UNDER SEPARATE COVER FOR ESTIMATED DRY HOLE COSTS**

Engineering and Supervision

EXACT Engineering, Inc.

(918) 599-9400 office

Operator: Wolverine Gas &amp; Oil Co of Utah, LLC

## DAILY DRILLING REPORT

24 hrs - midnight to midnight

DATE	WELL	CONTRACTOR	COUNTY, STATE	SPUD DATE	API#	SUPERVISOR	
01/29/08	Wolv Fed Arapien Valley 24-1	SST #68	Sanpete, UT	11/9/07	43-039-30030	DL Naylor- RD Rebsom	
DAYS F/ SPUD	PRESENT OPERATIONS @ 2400 Hour	TOTAL DEPTH	PROGRESS	DRILLING TIME	ROP	TD FORMATION	AUTH. DEPTH
82	TIH	11,321	10	1.00	10.00	Toroweap	16,200

## MUD DATA

DATE/TIME	DEPTH	WT	VIS	PV	YP	GELS	FILTRATE	CAKE/32	SOLIDS	SAND	PH	CHLORIDES	CALCIUM	SALT	LCM
1/29/7:am	11242	8.4+	54	15	20	9/14	8.0	1	1.50	tr	10.2	17,800	400		

## BIT DATA

BIT RUN	BIT NO	SIZE	MFG.	TYPE	IADC CODE	SERIAL NO.	JETS 1/32 or TFA	IN	OUT	FOOTAGE	HOURS	ROP	MTR Y/N	RPM RT+MTR	WOB	DULL GRADING									
																IR	OR	DC	LOC	B/S	G/16	OC	REASON PLD		
23	19	8.500	STC	H30ODVP	537H	PG2682	3x12	10390	10670	280	21.50	13.02	Y	0-70	28	4.0	5	WT	A	4/E	I	BT	MWD quit		
24	20	8.500	STC	H35ODVP	547H	PF9138	3x13	10670	11311	641	74.00	8.66	Y	0-70	20-35	3.0	4	WT	A	3/E	I	N	Press loss		
25	21	8.500	RTC	HP53ADH	537	KP2170	3x12,1x16	11311		10	1.00	10.00	Y	0-70	28	0.0	0	N	A	0/E	I	N	MWD quit		
26	21	8.500	RTC	HP53ADH	537	KP2170	3x12,1x16	11311					#DIV/0!												

## HYDRAULICS

## SLOW PUMP PSI

PUMP NO.	MANUFACTURER	LINER	STROKE LENGTH	GAL / STK 95%	SPM	GPM	AV DP	AV DC	PUMP PRESS.	MOTOR DIFF PSI	DEPTH	11192		
1	Nat'l 10P130	5.5	10	2.94	120	353					1	700		
2	Nat'l 10P130	5.5	10	2.94	0	0					2	700		
3					0	0					3			
					120	353	148	148	1800	200				

## DRILL STRING

## GEOLOGIC

## GENERAL INFO

BOTTOM HOLE ASSEMBLY#	28	LENGTH	O.D.	I.D.	CONFIDENTIAL REPORT										RIG INFO			
8 1/2" bit		1.00	8.500												Co Man	435-979-2202		
M1x-p/s motor 1.3		23.54	6.500												Mudlogger	435-979-6005		
MWD / gamma		38.50	6.500	3.38											Toolpusher	435-979-0544		
XO		2.62	6.500	2.88											Last BOP Test		1/22	
Filtersub		5.58	6.688	3.00											Next BOP Test		2/21	
Filtersub		5.16	6.375	3.00											Last Safety Meeting		1/29	
26 spiral wt.		795.40	5.000	3.00											Last BOP Drill		1/29	
jar		32.62	6.500	2.75											Last Operate Pipe Rams		1/29	
4 spiral wt.		120.95	5.000	3.00											Last Operate Blind Rams		1/29	
TOTAL		1,025.37													Last Operate Annular		1/29	
STRING WT.	BHA WT.	PU WT.	SO WT.	ROT. TORQUE	GRD. ELEVATION	GL TO KB	KB ELEVATION	SURF CSG	INT CASING 1	INT CASING 2	PROD CSG							
258	48	285	250		5,554	26	5,580	13-3/8@2017	9-5/8"@10372	(7-5/8"@14100)	(TD@16200)							

## SURVEYS

MD	INCL.	AZIMUTH	TVD	N+/S-	E+/W-	SECTION	DLS	TOOL	MD	INCL.	AZIMUTH	TVD	N+/S-	E+/W-	SECTION	DLS	TOOL

## DAILY ACTIVITY

FROM	TO	HRS	LAST 24 HOURS:
0:00	5:00	5.00	TIH to 10550
5:00	6:30	1.50	Wash 765' to btm.
6:30	7:30	1.00	Drill 11311 to 11321
7:30	8:00	0.50	Try to survey, Mwd & motor quit
8:00	10:30	2.50	Circ& condition, had sweep in hole had to circ out, returns from sweep minimal.
10:30	17:00	6.50	POOH for tool failure
17:00	18:00	1.00	LD vertitrak
18:00	19:30	1.50	Cut drilling line
19:30	20:00	0.50	Function test BOP
20:00	23:00	3.00	PU steerable ass. w/gamma, RU surface equipment.
23:00	0:00	1.00	TIH test MWD
0:00			
0:00			
0:00			
0:00			
0:00			
0:00			This am TIH
0:00			
0:00			
Daily Total		24.00	

SEE COST DETAIL PAGE UNDER SEPARATE COVER FOR ESTIMATED DRY HOLE COSTS

**24 hrs - midnight to midnight**

**SEE COST DETAIL PAGE UNDER SEPARATE COVER FOR ESTIMATED DRY HOLE COSTS**

**24 hrs - midnight to midnight**

[illegible]

**SEE COST DETAIL PAGE UNDER SEPARATE COVER FOR ESTIMATED DRY HOLE COSTS**

**24 hrs - midnight to midnight**

SEE COST DETAIL PAGE UNDER SEPARATE COVER FOR ESTIMATED DRY HOLE COSTS

**24 hrs - midnight to midnight**

## MUD DATA

## BIT DATA

## HYDRAULICS

**SLOW PUMP PSI**

## DRILL STRING

## GEOLOGIC

## GENERAL INFO

**CONFIDENTIAL REPORT**

### DAILY ACTIVITY

SEE COST DETAIL PAGE UNDER SEPARATE COVER FOR ESTIMATED DRY HOLE COSTS

Engineering and Supervision		EXACT Engineering, Inc.										(918) 599-9400 office																																	
Operator: Wolverine Gas & Oil Co of Utah, LLC		DAILY DRILLING REPORT										24 hrs - midnight to midnight																																	
DATE 02/03/08		WELL Wolv Fed Arapien Valley 24-1				CONTRACTOR SST #68				COUNTY, STATE Sanpete, UT		SPUD DATE 11/9/07		API# 43-039-30030		SUPERVISOR DL Naylor- RD Rebsom																													
DAYS F/ SPUD 87		PRESENT OPERATIONS @ 2400 Hour Drilling				TOTAL DEPTH 11,975		PROGRESS 118		DRILLING TIME 24.00		ROP 4.92		TD FORMATION Toroweap		AUTH. DEPTH 16,200																													
MUD DATA																																													
DATE/TIME 2/3-8:00am		DEPTH 11905		WT 8.5		VIS 66		PV 20		YP 30		GELS 12/18		FILTRATE 6.6		CAKE/32 1		SOLIDS 2.00		SAND tr		PH 10.3		CHLORIDES 15,000		CALCIUM 450		SALT 		LCM 															
BIT DATA																																													
BIT RUN		SIZE		MFG.		TYPE		IADC CODE		SERIAL NO.		JETS 1/32 or TFA		IN		OUT		FOOTAGE		HOURS		ROP		MTR Y/N		RPM RT+MTR		WOB		DULL GRADING															
																														IR		OR		DC		LOC		B/S		G/18		OC		REASON PLD	
26		21		8.500		RTC		HP53ADH		537		KP2170		3x12,1x16		11311		11596		285		36.50		7.81		Y		30-70		24-28		8.0		5		BT		I		8		1/8"		P. Rate	
27		22		8.500		RTC		TD74PHD		747		DH1664		3X14		11596				379		62.00		6.11		Y		30-70		26-28															
																								#DIV/0!																					
																								#DIV/0!																					
HYDRAULICS																		SLOW PUMP PSI																											
PUMP NO.		MANUFACTURER		LINER		STROKE LENGTH		GAL / STK 95%		SPM		GPM		AV DP		AV DC		PUMP PRESS.		MOTOR DIFF PSI				DEPTH		11813																			
1		Nat'l 10P130		5.5		10		2.94		120		353												1		475																			
2		Nat'l 10P130		5.5		10		2.94		0		0												2		475																			
3										0		0												3																					
										120		353		148		148		1625		155																									
DRILL STRING																		GEOLOGIC										GENERAL INFO																	
BOTTOM HOLE ASSEMBLY#		29		LENGTH		O.D.		I.D.		CONFIDENTIAL REPORT										RIG INFO																									
8 1/2" bit				1.00		8.500																								Co Man 435-979-2202															
Mix-p/ls motor 1.3				23.54		6.500																								Mudlogger 435-979-6005															
MWD / gamma				34.56		6.250		2 7/8"																						Toolpusher 435-979-0544															
XO				2.62		6.500		2.88																						Last BOP Test 1/22															
Filtersub				5.58		6.688		3.00																						Next BOP Test 2/21															
Filtersub				5.16		6.375		3.00																						Last Safety Meeting 2/3															
26 spiral wt.				795.40		5.000		3.00																						Last BOP Drill 1/29															
jar				32.62		6.500		2.75																						Last Operate Pipe Rams 1/29															
4 spiral wt.				120.95		5.000		3.00																						Last Operate Blind Rams 2/1															
TOTAL				1,021.43																Last Operate Annular 1/29																									
STRING WT.		BHA WT.		PU WT.		SO WT.		ROT. TORQUE		GRD. ELEVATION		GL TO KB		KB ELEVATION		SURF CSG		INT CASING 1		INT CASING 2		PROD CSG																							
268,000		48		295,000		258,000		948		5,554		26		5,580		13-3/8@2017		9-5/8"@10372		(7-5/8"@14100)		(TD@																							

24 hrs - midnight to midnight

DAILY ACTIVITY			
FROM	TO	HRS	LAST 24 HOURS:
0:00	9:00	9.00	Drill & survey from 11975' to 12014'
9:00	11:00	2.00	Trip out to 10300' had to pump out from 11825' to 10464'-- pulling 30-35,000 over with pump on & rotating slow
11:00	15:00	4.00	Trip into 10496' -- Wash & ream from 10496' to 12014'
15:00	16:30	1.50	Circ bottoms up
16:30	21:30	5.50	Trip out to 11780' had to pump out from 11780' to 10565'-- pulling 15-20,000 over with pump on & rotating slow
21:30	23:30	2.00	Change Bha -- lay down flex jt. & Mwd & gamma -- pickup VertiTrak
23:30	0:00	0.50	Trip in
0:00			
0:00			
0:00			
0:00			
0:00			
0:00			
0:00			
0:00			
0:00			12014' -- Wash & ream @ 11053' @ 0515 hour
0:00			
0:00			
0:00			
Daily Total		24.50	

**SEE COST DETAIL PAGE UNDER SEPARATE COVER FOR ESTIMATED DRY HOLE COSTS**



24 hrs - midnight to midnight

SEE COST DETAIL PAGE UNDER SEPARATE COVER FOR ESTIMATED DRY HOLE COSTS

Engineering and Supervision

## EXACT Engineering, Inc.

(918) 599-9400 office

Operator: Wolverine Gas &amp; Oil Co of Utah, LLC

## DAILY DRILLING REPORT

24 hrs - midnight to midnight

DATE	WELL	CONTRACTOR	COUNTY, STATE	SPUD DATE	API#	SUPERVISOR		
02/06/08	Wolv Fed Arapien Valley 24-1	SST #68	Sanpete, UT	11/9/07	43-039-30030	DL Naylor- RD Rebsom		
DAYS F/ SPUD	PRESENT OPERATIONS @ 2400 Hour		TOTAL DEPTH	PROGRESS	DRILLING TIME	ROP	TD FORMATION	AUTH. DEPTH
90	Trip in		12,169	48	10.00	4.80	Toroweap	16,200

## MUD DATA

DATE/TIME	DEPTH	WT	VIS	PV	YP	GELS	FILTRATE	CAKE/32	SOLIDS	SAND	PH	CHLORIDES	CALCIUM	SALT	LCM
2/6-8:00am	12014	8.5	65	22	32	13/19	6.0	1	2.00	tr	10.7	17,000	400		

## BIT DATA

BIT RUN	BIT NO	SIZE	MFG.	TYPE	IADC CODE	SERIAL NO.	JETS 1/32 or TFA	IN	OUT	FOOTAGE	HOURS	ROP	MTR Y/N	RPM RT+MTR	WOB	DULL GRADING									
																IR	OR	DC	LOC	B/S	G/16	OC	REASON PLD		
28	23	8.500	STC	F67ODG	647	MY1935	3X14	12014	12169	155	24.00	6.46	Y	0-120	36-42	8.0	8	BT	A	2	1/8"		Presssure		
29	24	8.500	STC	F67ODG	647	EB4694	X16 1-Blar	12169		0	0.00	#DIV/0!													
												#DIV/0!													
												#DIV/0!													

## HYDRAULICS

PUMP NO.	MANUFACTURER	LINER	STROKE LENGTH	GAL / STK 95%	SPM	GPM	AV DP	AV DC	PUMP PRESS.	MOTOR DIFF PSI	DEPTH	12064		
1	Nat'l 10P130	5.5	10	2.94	120	353					1	500		
2	Nat'l 10P130	5.5	10	2.94	0	0					2	500		
3					0						3			
					120	353	148	148	1825	155				

## SLOW PUMP PSI

DRILL STRING				GEOLOGIC								GENERAL INFO			
BOTTOM HOLE ASSEMBLY#	31	LENGTH	O.D.	I.D.	CONFIDENTIAL REPORT								RIG INFO		
8 1/2" bit		1.00	8.500										Co Man	435-979-2202	
Junk sub		1.97	5 7/16"	2.25									Mudlogger	435-979-6005	
Bit sub		3.53	6 5/8"	2.3/8									Toolpusher	435-979-0544	
XO		2.62	6.500	2.88									Last BOP Test	1/22	
Filtersub		5.58	6.688	3.00									Next BOP Test	2/21	
Filtersub		5.16	6.375	3.00									Last Safety Meeting	2/6	
26 spiral wt.		795.40	5.000	3.00									Last BOP Drill	2/6	
jar		32.62	6.500	2.75									Last Operate Pipe Rams	2/5	
4 spiral wt.		120.95	5.000	3.00									Last Operate Blind Rams	2/6	
TOTAL		968.83											Last Operate Annular	2/6	
STRING WT.	BHA WT.	PU WT.	SO WT.	ROT. TORQUE	GRD. ELEVATION	GL TO KB	KB ELEVATION	SURF CSG	INT CASING 1	INT CASING 2	PROD CSG				
270,000	45,000	298,000	260,000	0	5,554	26	5,580	13-3/8@2017	9-5/8"@10372	(7-5/8"@14100)	(TD@16200)				

## SURVEYS

MD	INCL.	AZIMUTH	TVD	N-S	E-W	SECTION	DLS	TOOL	MD	INCL.	AZIMUTH	TVD	N-S	E-W	SECTION	DLS	TOOL

## DAILY ACTIVITY

FROM	TO	HRS	LAST 24 HOURS:
0:00	10:00	10.00	Drill & survey from 12121' to 12169'
10:00	10:30	0.50	Circ.
10:30	19:00	8.50	Trip out-pumpout 12169' to 10408'-
19:00	20:30	1.50	Lay down VertiTrak-pickup junk sub&bit sub-work blind rams
20:30	22:00	1.50	Trip into 3509'
22:00	23:30	1.50	Cut & slip drilling line-fill pipe
23:30	0:00	0.50	Trip in
0:00			
0:00			On trip out encountered more troubles @ 12132' was stuck & packed off for a short period of time worked free
0:00			Backed ream out to 10408'
0:00			
0:00			Encountered more troubles @ 8359" to 8334' inside casing @ 8334' string wt went from 226,000 to 323,000
0:00			Jars went off string wt fell back to 261,000 from there from there it took 35,000 over sting wt. to 8334'
0:00			Then string wt. went back to normal the rest of the way out of the hole
0:00			
0:00			Bit # 23 Graded @ 8-8-E with all 3 nose cones worn off 1/8" out of gauge had vertical scares on all 3 shanks
0:00			While dragging inside of casing.
0:00			When going back in hole tight @ 8334' worked down to 8437' setting 40,000 making 2-3" per stroke then it quit
0:00			Making progress eased up to 50-55,000 down making 1-1 1/2" per stroke then it fell free @ 8438'
Daily Total	24.00		12175' Drilling @ 0500 hour

SEE COST DETAIL PAGE UNDER SEPARATE COVER FOR ESTIMATED DRY HOLE COSTS

Engineering and Supervision

EXACT Engineering, Inc.

(918) 599-9400 office

Operator: Wolverine Gas &amp; Oil Co of Utah, LLC

## DAILY DRILLING REPORT

24 hrs - midnight to midnight

DATE	WELL	CONTRACTOR	COUNTY, STATE	SPUD DATE	API#	SUPERVISOR	
02/07/08	Wolv Fed Arapien Valley 24-1	SST #68	Sanpete, UT	11/9/07	43-039-30030	DL Naylor- RD Rebsom	
DAYS F/ SPUD	PRESENT OPERATIONS @ 2400 Hour	TOTAL DEPTH	PROGRESS	DRILLING TIME	ROP	TD FORMATION	AUTH. DEPTH
91	Wait on loggers	12,193	24	10.00	2.40	Toroweap	16,200

## MUD DATA

DATE/TIME	DEPTH	WT	VIS	PV	YP	GELS	FILTRATE	CAKE/32	SOLIDS	SAND	PH	CHLORIDES	CALCIUM	SALT	LCM
2/7-8:00am	12190	8.5	64	22	33	13/19	6.0	1	2.00	tr	11.5	17,000	400		

## BIT DATA

BIT DATA																DULL GRADING									
BIT RUN	BIT NO	SIZE	MFG.	TYPE	IADC CODE	SERIAL NO.	JETS 1/32 or TFA	IN	OUT	FOOTAGE	HOURS	ROP	MTR Y/N	RPM RT+MTR	WOB	IR	OR	DC	LOC	B/S	G/16	OC	REASON PLD		
28	23	8.500	STC	F67ODG	647	MY1935	3X14	12014	12169	155	24.00	6.46	Y	0-120	36-42	8.0	8	BT	A	2	1/8"		Presssure		
29	24	8.500	STC	F67ODG	647	EB4694	X16 1-Blar	12169	12193	24	0.00	#DIV/0!	N	40.00	20-25	4.0	4	WT	A	2	In		Log		
												#DIV/0!													
												#DIV/0!													

## HYDRAULICS

## SLOW PUMP PSI

PUMP NO.	MANUFACTURER	LINER	STROKE LENGTH	GAL / STK 95%	SPM	GPM	AV DP	AV DC	PUMP PRESS.	MOTOR DIFF PSI	DEPTH	12064		
1	Nat'l 10P130	5.5	10	2.94	120	353					1	500		
2	Nat'l 10P130	5.5	10	2.94	0	0					2	500		
3					0	0					3			
					120	353	148	148	1300	155				

## DRILL STRING

## GEOLOGIC

## GENERAL INFO

BOTTOM HOLE ASSEMBLY#	31	LENGTH	O.D.	I.D.	CONFIDENTIAL REPORT										RIG INFO			
8 1/2" bit		1.00	8.500												Co Man	435-979-2202		
Junk sub		1.97	5 7/16"	2.25											Mudlogger	435-979-6005		
Bit sub		3.53	6 5/8"	2.3/8											Toolpusher	435-979-0544		
XO		2.62	6.500	2.88											Last BOP Test		1/22	
Filtersub		5.58	6.688	3.00											Next BOP Test		2/21	
Filtersub		5.16	6.375	3.00											Last Safety Meeting		2/7	
26 spiral wt.		795.40	5.000	3.00											Last BOP Drill		2/6	
jar		32.62	6.500	2.75											Last Operate Pipe Rams		2/5	
4 spiral wt.		120.95	5.000	3.00											Last Operate Blind Rams		2/7	
TOTAL		968.83													Last Operate Annular		2/6	
STRING WT.	BHA WT.	PU WT.	SO WT.	ROT. TORQUE	GRD. ELEVATION	GL TO KB	KB ELEVATION	SURF CSG	INT CASING 1	INT CASING 2	PROD CSG							
270,000	45,000	298,000	260,000	0	5,554	26	5,580	13-3/8@2017	9-5/8"@10372	(7-5/8"@14100)	(TD@16200)							

## SURVEYS

MD	INCL.	AZIMUTH	TVD	N+/S-	E+/W-	SECTION	DLS	TOOL	MD	INCL.	AZIMUTH	TVD	N+/S-	E+/W-	SECTION	DLS	TOOL

## DAILY ACTIVITY

FROM	TO	HRS	LAST 24 HOURS:
0:00	3:00	3.00	Trip in 12106'
3:00	4:30	1.50	Wash & ream 12106' to 12169' clean bottom work junk basket
4:30	8:00	3.50	Drill from 12169' to 12190'
8:00	12:30	4.50	Trip out 12190' to 11988' pump out to 10435'-trip out to 8359' work tight spot to 8359' to 8334'
12:30	15:00	2.50	Trip in to 12044'
15:00	15:30	0.50	wash & ream 12044' to 12190'
15:30	17:00	1.50	Drill from 12190' to 12193'
17:00	18:30	1.50	Circ. Cond hole for logs
18:30	23:00	4.50	Trip out for logs-did not half to pump any out
23:00	0:00	1.00	Wait on loggers
0:00			
0:00			
0:00			
0:00			
0:00			
0:00			12193' wait on loggers @ 0230 hour
0:00			
0:00			
0:00			
Daily Total		24.00	

SEE COST DETAIL PAGE UNDER SEPARATE COVER FOR ESTIMATED DRY HOLE COSTS

**Operator: Wolverine Gas & Oil Co of Utah, LLC**

# DAILY DRILLING REPORT

**24 hrs - midnight to midnight**

DATE	WELL	CONTRACTOR	COUNTY, STATE	SPUD DATE	API#	SUPERVISOR	
02/08/08	Wolv Fed Arapien Valley 24-1	SST #68	Sanpete, UT	11/9/07	43-039-30030	DL Naylor- RD Rebsom	
DAYS F/ SPUD	PRESENT OPERATIONS @ 2400 Hour	TOTAL DEPTH	PROGRESS	DRILLING TIME	ROP	TD FORMATION	AUTH. DEPTH
92	Logging	12,193	0	0.00	#DIV/0!	Toroweap	16,200

## MUD DATA

DATE/TIME	DEPTH	WT	VIS	PV	YP	GELS	FILTRATE	CAKE/32	SOLIDS	SAND	PH	CHLORIDES	CALCIUM	SALT	LCM	
2/8-8:00am	12193	8.5	80	19	27	11/18	6.2	1	2.00	tr	10.4	17,000	400			

## BIT DATA

[illegible]

## HYDRAULICS

PUMP NO.	MANUFACTURER	LINER	STROKE LENGTH	GAL / STK 95%	SPM	GPM	AV DP	AV DC	PUMP PRESS.	MOTOR DIFF PSI		DEPTH	12064		
												SPM	50		
1	Nat'l 10P130	5.5	10	2.94	120	353						1	500		
2	Nat'l 10P130	5.5	10	2.94	0	0						2	500		
3												3			
					120	353	148	148	1300	155					

**SLOW PUMP PSI**

DEPTH	12064		
SPM	50		
1	500		
2	500		
3			

## DRILL STRING

BOTTOM HOLE ASSEMBLY#		31	LENGTH	O.D.	I.D.
8 1/2" bit			1.00	8.500	
Junk sub			1.97	5 7/16"	2.25
Bit sub			3.53	6 5/8"	2.3/8
XO			2.62	6.500	2.88
Filtersub			5.58	6.688	3.00
Filtersub			5.16	6.375	3.00
26 spiral wt.			795.40	5.000	3.00
jar			32.62	6.500	2.75
4 spiral wt.			120.95	5.000	3.00
TOTAL			968.83		
STRING WT.	BHA WT.	PU WT.	SO WT.	ROT. TORQUE	
270,000	45,000	298,000	260,000	0	

## GEOLOGIC

**CONFIDENTIAL REPORT**

## GENERAL INFO

RIG INFO	
Co Man	435-979-2202
Mudlogger	435-979-6005
Toolpusher	435-979-0544
Last BOP Test	1/22
Next BOP Test	2/21
Last Safety Meeting	2/8
Last BOP Drill	2/6
Last Operate Pipe Rams	2/5
Last Operate Blind Rams	2/8
Last Operate Annular	2/6
INT CASING 2	PROD CSG
(7-5/8" @ 14100)	(TD @ 16200)

## **SURVEYS**

[illegible]

## DAILY ACTIVITY

[illegible]

SEE COST DETAIL PAGE UNDER SEPARATE COVER FOR ESTIMATED DRY HOLE COSTS

Engineering and Supervision										EXACT Engineering, Inc.										(918) 599-9400 office																													
Operator: Wolverine Gas & Oil Co of Utah, LLC										DAILY DRILLING REPORT										24 hrs - midnight to midnight																													
DATE		WELL				CONTRACTOR				COUNTY, STATE		SPUD DATE		API#		SUPERVISOR																																	
02/09/08		Wolv Fed Arapien Valley 24-1				SST #68				Sanpete, UT		11/9/07		43-039-30030		DL Naylor- RD Rebsom																																	
DAYS F/ SPUD		PRESENT OPERATIONS @ 2400 Hour				TOTAL DEPTH		PROGRESS		DRILLING TIME		ROP		TD FORMATION		AUTH. DEPTH																																	
93		Trip in				12,193		0		0.00		#DIV/0!		Toroweap		16,200																																	
MUD DATA																																																	
DATE/TIME		DEPTH		WT		VIS		PV		YP		GELS		FILTRATE		CAKE/32		SOLIDS		SAND		PH		CHLORIDES		CALCIUM		SALT		LCM																			
2/9-8:00am		12193		8.5		83		15		27		11/18		6.2		1		2.00		tr		10.4		17,000		400																							
BIT DATA																																																	
BIT RUN		BIT NO		SIZE		MFG.		TYPE		IADC CODE		SERIAL NO.		JETS 1/32 or TFA		IN		OUT		FOOTAGE		HOURS		ROP		MTR Y/N		RPM RT+MTR		WOB		DULL GRADING																	
																																		IR		OR		DC		LOC		B/S		G/16		OC		REASON PLD	
30		25		8.500												12193								#DIV/0!																									
																								#DIV/0!																									
																								#DIV/0!																									
																								#DIV/0!																									
HYDRAULICS																		SLOW PUMP PSI																															
PUMP NO.		MANUFACTURER		LINER		STROKE LENGTH		GAL / STK 95%		SPM		GPM		AV DP		AV DC		PUMP PRESS.		MOTOR DIFF PSI				DEPTH		12064																							
1		Nat'l 10P130		5.5		10		2.94		120		353												SPM		50																							
2		Nat'l 10P130		5.5		10		2.94		0		0												2		500																							
3										0														3																									
										120		353		148		148		650		155																													
DRILL STRING										GEOLOGIC										GENERAL INFO																													
BOTTOM HOLE ASSEMBLY# 32				LENGTH				O.D.				I.D.				CONFIDENTIAL REPORT										RIG INFO																							
8.5" Casing roller 4-1/2 re				3.68				8.500				1.25"														Co Man 435-979-2202																							
x-over 4-1/2regx4-1/2fh b				1.27				5-7/8"				2-5/16"														Mudlogger 435-979-6005																							
x-over 4-1/2 fh x 4-1/2 if b				1.66				5-15/16"				2-1/8"														Toolpusher 435-979-0544																							
float sub				2.45				6-11/16"				3"														Last BOP Test 1/22																							
Filtersub				5.16				6.688				3.00														Next BOP Test 2/21																							
																										Last Safety Meeting 2/9																							
																										Last BOP Drill 2/9																							
26 spiral wt.				795.40				5.000				3.00														Last Operate Pipe Rams 2/5																							
jar				32.62				6.500				2.75														Last Operate Blind Rams 2/9																							
4 spiral wt.				120.95				5.000				3.00				Last Operate Annular 2/6																																	
TOTAL				963.19																																													
STRING WT.				BHA WT.				PU WT.				SO WT.				ROT. TORQUE				GRD. ELEVATION				GL TO KB				KB ELEVATION				SURF CSG				INT CASING 1				INT CASING 2				PROD CSG					
270,000				45,000				298,000				260,000				0				5,554				26				5,580				13-3/8@2017				9-5/8"@10372				(7-5/8"@14100)				(TD@16200)					
SURVEYS																																																	
MD		INCL.		AZIMUTH		TVD		N-S		E-W		SECTION		DLS		TOOL		MD		INCL.		AZIMUTH		TVD																									

Engineering and Supervision

## EXACT Engineering, Inc.

(918) 599-9400 office

Operator: Wolverine Gas &amp; Oil Co of Utah, LLC

## DAILY DRILLING REPORT

24 hrs - midnight to midnight

DATE	WELL	CONTRACTOR	COUNTY, STATE	SPUD DATE	API#	SUPERVISOR	
02/10/08	Wolv Fed Arapien Valley 24-1	SST #68	Sanpete, UT	11/9/07	43-039-30030	DL Naylor- RD Rebsom	
DAYS F/ SPUD	PRESENT OPERATIONS @ 2400 Hour	TOTAL DEPTH	PROGRESS	DRILLING TIME	ROP	TD FORMATION	AUTH. DEPTH
94	Trip out	12,206	13	1.00	13.00	Toroweap	16,200

## MUD DATA

DATE/TIME	DEPTH	WT	VIS	PV	YP	GELS	FILTRATE	CAKE/32	SOLIDS	SAND	PH	CHLORIDES	CALCIUM	SALT	LCM
2/10-8:00am	12193	8.5	80	16	28	11/18	6.2	1	2.00	tr	10.3	17,000	400		

## BIT DATA

BIT RUN	BIT NO	SIZE	MFG.	TYPE	IADC CODE	SERIAL NO.	JETS 1/32 or TFA	IN	OUT	FOOTAGE	HOURS	ROP	MTR Y/N	RPM RT+MTR	WOB	DULL GRADING							
30	25	8.500	SRC	F47ODPS	627	EB4694	3X16	12193	12206	13	1.00	13.00	N	55.00	30-40	3.0	7	bt	o	2	In		Bha
												#DIV/0!											
												#DIV/0!											
												#DIV/0!											

## HYDRAULICS

PUMP NO.	MANUFACTURER	LINER	STROKE LENGTH	GAL / STK 95%	SPM	GPM	AV DP	AV DC	PUMP PRESS.	MOTOR DIFF PSI	DEPTH	12064		
1	Nat'l 10P130	5.5	10	2.94	103	303					1	500		
2	Nat'l 10P130	5.5	10	2.94	0	0					2	500		
3						0					3			
					103	303			1050	155				

## SLOW PUMP PSI

DRILL STRING					GEOLOGIC								GENERAL INFO			
BOTTOM HOLE ASSEMBLY#	33	LENGTH	O.D.	I.D.	CONFIDENTIAL REPORT								RIG INFO			
Bit		1.00	8.500										Co Man	435-979-2202		
Junk sub		1.97	5 7/16"	2.25"									Mudlogger	435-979-6005		
Bit sub		3.53	6 5/8"	2 3/8"									Toolpusher	435-979-0544		
float sub		2.45	6-11/16"	3"									Last BOP Test	1/22		
Filtersub		5.16	6.688	3.00									Next BOP Test	2/21		
													Last Safety Meeting	2/10		
26 spiral wt.		795.40	5.000	3.00									Last BOP Drill	2/9		
jar		32.62	6.500	2.75									Last Operate Pipe Rams	2/5		
4 spiral wt.		120.95	5.000	3.00									Last Operate Blind Rams	2/9		
TOTAL		963.08											Last Operate Annular	2/6		
STRING WT.	BHA WT.	PU WT.	SO WT.	ROT. TORQUE	GRD. ELEVATION	GL TO KB	KB ELEVATION	SURF CSG	INT CASING 1	INT CASING 2	PROD CSG					
268,000	45,000	298,000	260,000	0	5,554	26	5,580	13-3/8@2017	9-5/8"@10372	(7-5/8"@14100)	(TD@16200)					

## SURVEYS

MD	INCL	AZIMUTH	TVD	N-S	E-W	SECTION	DLS	TOOL	MD	INCL	AZIMUTH	TVD	N-S	E-W	SECTION	DLS	TOOL

## DAILY ACTIVITY

FROM	TO	HRS	LAST 24 HOURS:
0:00	1:00	1.00	Trip into 6982'
1:00	6:00	5.00	Roll casing from 6982' to 7240---7320' to 7590---8320' to 8350---trip into 8848'
6:00	11:00	5.00	Trip out reroll casing @ 7513' to 7510' again @ 7154' to 7149'
11:00	12:00	1.00	Lay down casing roller--pickup bit & junk sub--- rollers on casing roller gauged out 8 3/8" --1/8" out of gauge
12:00	16:00	4.00	Trip into 11032'--- @ 8348' took 18,000 to push threw 34,000 to pull up threw
16:00	16:30	0.50	Wash & ream 11032' to 11226'
16:30	17:30	1.00	Trip into 12046'
17:30	18:00	0.50	Wash & ream 12046' to 12193'
18:00	19:00	1.00	Drill from 12193' to 12206'
19:00	21:30	2.50	Work junk basket & circ & cond mud
21:30	0:00	2.50	Trip out no trouble tripping out to casing shoe
0:00			
0:00			Ruffest spots to roll out were @ 7149' to 7151'
0:00			7510' to 7513'
0:00			8339' to 8348'
0:00			
0:00			On trip out 8348' pulled 6.000 over string wt. -- Hole is in excelent cond.
0:00			12206' pickup VerTitrak @ 0300 hour
0:00			
Daily Total		24.00	

SEE COST DETAIL PAGE UNDER SEPARATE COVER FOR ESTIMATED DRY HOLE COSTS

Engineering and Supervision

EXACT Engineering, Inc.

(918) 599-9400 office

Operator: Wolverine Gas &amp; Oil Co of Utah, LLC

## DAILY DRILLING REPORT

24 hrs - midnight to midnight

DATE	WELL	CONTRACTOR	COUNTY, STATE	SPUD DATE	API#	SUPERVISOR	
02/11/08	Wolv Fed Arapien Valley 24-1	SST #68	Sanpete, UT	11/9/07	43-039-30030	DL Naylor- RD Rebsom	
DAYS F/ SPUD	PRESENT OPERATIONS @ 2400 Hour	TOTAL DEPTH	PROGRESS	DRILLING TIME	ROP	TD FORMATION	AUTH. DEPTH
95	Drilling	12,312	106	12.00	8.83	Toroweap	16,200

## MUD DATA

DATE/TIME	DEPTH	WT	VIS	PV	YP	GELS	FILTRATE	CAKE/32	SOLIDS	SAND	PH	CHLORIDES	CALCIUM	SALT	LCM
2/11-8:00am	12206	8.5	65	17	26	11/17	7.0	1	2.00	tr	9.5	17,000	240		

## BIT DATA

DR DATA																DULL GRADING							
BIT RUN	BIT NO	SIZE	MFG.	TYPE	IADC CODE	SERIAL NO.	JETS 1/32 or TFA	IN	OUT	FOOTAGE	HOURS	ROP	MTR Y/N	RPM RT+MTR	WOB	IR	OR	DC	LOC	B/S	G/16	OC	REASON PLD
30	25	8.500	SRC	F47ODPS	627	EB4694	3X16	12193	12206	13	1.00	13.00	N	55.00	30-40	3.0	7	bt	o	2	In		Bha
31	26	8.500	REED	TD74PHD	747	DH1625	1-BK-2-18	12206		106	12.00	8.83	Y	0-114	34-36								
												#DIV/0!											
												#DIV/0!											

## HYDRAULICS

## SLOW PUMP PSI

PUMP NO.	MANUFACTURER	LINER	STROKE LENGTH	GAL / STK 95%	SPM	GPM	AV DP	AV DC	PUMP PRESS.	MOTOR DIFF PSI	DEPTH	12244		
1	Nat'l 10P130	5.5	10	2.94	110	323					1			
2	Nat'l 10P130	5.5	10	2.94	0	0					2	850		
3					0	0					3			
					110	323			1550	155				

## DRILL STRING

## GEOLOGIC

## GENERAL INFO

BOTTOM HOLE ASSEMBLY#	34	LENGTH	O.D.	I.D.	CONFIDENTIAL REPORT										RIG INFO		
Bit		1.00	8.500												Co Man	435-979-2202	
VertiTrak		30.75													Mudlogger	435-979-6005	
															Toolpusher	435-979-0544	
float sub		2.45	6.750	2.81											Last BOP Test		1/22
Filtersub		5.58	6.688	3.00											Next BOP Test		2/21
															Last Safety Meeting		2/11
26 spiral wt.		795.40	5.000	3.00											Last BOP Drill		2/11
jar		32.62	6.500	2.75											Last Operate Pipe Rams		2/5
4 spiral wt.		120.95	5.000	3.00											Last Operate Blind Rams		2/9
TOTAL		988.75													Last Operate Annular		2/11
STRING WT.	BHA WT.	PU WT.	SO WT.	ROT. TORQUE	GRD. ELEVATION	GL TO KB	KB ELEVATION	SURF CSG	INT CASING 1	INT CASING 2	PROD CSG						
270,000	45,000	302,000	261,000	0	5,554	26	5,580	13-3/8@2017	9-5/8"@10372	(7-5/8"@14100)	(TD@16200)						

## SURVEYS

MD	INCL.	AZIMUTH	TVD	N+S-	E+/W-	SECTION	DLS	TOOL	MD	INCL.	AZIMUTH	TVD	N+S-	E+/W-	SECTION	DLS	TOOL

## DAILY ACTIVITY

FROM	TO	HRS	LAST 24 HOURS:
0:00	2:00	2.00	Trip out -- work blind rams
2:00	3:00	1.00	Lay down junk sub -- pickup VertiTrak -- clean filter sub & junk sub
3:00	7:30	4.50	Trip into 7608'
7:30	8:30	1.00	Cut & slip 120' drilling line
8:30	10:30	2.00	Trip into 12103'
10:30	11:30	1.00	Wash & ream from 12103' to 12206' -- no fill
11:30	15:30	4.00	Drill & survey from 12206' to 12233'
15:30	16:00	0.50	H2s -- Bop drill -- service rig--top drive
16:00	0:00	8.00	Drill & survey from 12233' to 12312'
0:00			
0:00			Recovered a couple dozen broken buttons & 5 small pieces of nose cones from bit # 23
0:00			Did not see any tight spots tripping inside of casing
0:00			
0:00			Mixed 80 bbl high 107 vis sweep @ 12306' brought back 3/4 yard of small pea gravel size cutting
0:00			12365' Drilling @ 0630 hour
0:00			
0:00			
0:00			
0:00			
Daily Total		24.00	

SEE COST DETAIL PAGE UNDER SEPARATE COVER FOR ESTIMATED DRY HOLE COSTS

Engineering and Supervision

EXACT Engineering, Inc.

(918) 599-9400 office

Operator: Wolverine Gas &amp; Oil Co of Utah, LLC

## DAILY DRILLING REPORT

24 hrs - midnight to midnight

DATE	WELL	CONTRACTOR	COUNTY, STATE	SPUD DATE	API#	SUPERVISOR	
02/12/08	Wolv Fed Arapien Valley 24-1	SST #68	Sanpete, UT	11/9/07	43-039-30030	DL Naylor- RD Rebsom	
DAYS F/ SPUD	PRESENT OPERATIONS @ 2400 Hour	TOTAL DEPTH	PROGRESS	DRILLING TIME	ROP	TD FORMATION	AUTH. DEPTH
96	Drilling	12,372	60	8.00	7.50	Toroweap	16,200

## MUD DATA

DATE/TIME	DEPTH	WT	VIS	PV	YP	GELS	FILTRATE	CAKE/32	SOLIDS	SAND	PH	CHLORIDES	CALCIUM	SALT	LCM
2/12/8:00am	12366	8.5	70	19	31	13/21	7.2	1	2.00	tr	10.2	12,500	300		

## BIT DATA

BIT RUN	BIT NO	SIZE	MFG.	TYPE	IADC CODE	SERIAL NO.	JETS 1/32 or TFA	IN	OUT	FOOTAGE	HOURS	ROP	MTR Y/N	RPM RT+MTR	WOB	DULL GRADING									
																IR	OR	DC	LOC	B/S	G/16	OC	REASON PLD		
30	25	8.500	STC	F470DPS	627	EB4694	3X16	12193	12206	13	1.00	13.00	N	55.00	30-40	3.0	5	bt	o	2	In		Bha		
31	26	8.500	REED	TD74PHD	747	DH1625	1-BK-2-18	12206	12366	160	19.00	8.42	Y	0-78	34-36	6.0	8	VTB	I-O	2	1/16"		P. Rate		
32	27	8.500	STC	F80YOD	817	DH1625	1-13-2-18	12366		6	1.00	6.00	Y	0-78	14-34										
												#DIV/0!													

## HYDRAULICS

## SLOW PUMP PSI

PUMP NO.	MANUFACTURER	LINER	STROKE LENGTH	GAL / STK 95%	SPM	GPM	AV DP	AV DC	PUMP PRESS.	MOTOR DIFF PSI	DEPTH
											12360
											SPM 40
1	Nat'l 10P130	5.5	10	2.94	110	323					1
2	Nat'l 10P130	5.5	10	2.94	0	0					2
3					0	0					3
					110	323	142	142	1550	125	

## DRILL STRING

## GEOLOGIC

## GENERAL INFO

BOTTOM HOLE ASSEMBLY# 35		LENGTH	O.D.	I.D.	<div>CONFIDENTIAL REPORT</div>								RIG INFO		
Bit		1.00	8.500										Co Man	435-979-2202	
VertiTrak		30.75	7.063										Mudlogger	435-979-6005	
													Toolpusher	435-979-0544	
float sub		2.45	6.750	2.81									Last BOP Test	1/22	
Filtersub		5.58	6.688	3.00									Next BOP Test	2/21	
													Last Safety Meeting	2/12	
26 spiral wt.		795.40	5.000	3.00									Last BOP Drill	2/12	
jar		32.62	6.500	2.75									Last Operate Pipe Rams	2/12	
4 spiral wt.		120.95	5.000	3.00									Last Operate Blind Rams	2/12	
TOTAL		988.75											Last Operate Annular	2/11	
STRING WT.	BHA WT.	PU WT.	SO WT.	ROT. TORQUE	GRD. ELEVATION	GL TO KB	KB ELEVATION	SURF CSG	INT CASING 1	INT CASING 2	PROD CSG				
272,000	45,000	304,000	263,000	0	5,554	26	5,580	13-3/8@2017	9-5/8"@10372	(7-5/8"@14100)	(TD@16200)				

## SURVEYS

MD	INCL.	AZIMUTH	TVD	N+S	E+/-W	SECTION	DLS	TOOL	MD	INCL.	AZIMUTH	TVD	N+S	E+/-W	SECTION	DLS	TOOL

## DAILY ACTIVITY

FROM	TO	HRS	LAST 24 HOURS:
0:00	7:00	7.00	Drill & survey from 12312' to 12366'
7:00	9:00	2.00	Circ. Bottoms up & circ. 104 vis 80 bbls sweep around brought back approx. 1/8 yard of very small size pee gravel
9:00	15:00	6.00	Pump out 7 stands--trip out hole--no drag inside of casing--work blind rams
15:00	16:00	1.00	Clean filter sub--change bits--service rig
16:00	20:00	4.00	Trip into 8339' got tight
20:00	21:00	1.00	Work bit threw tight spot from 8339' to 8347'
21:00	22:30	1.50	Trip into 12315'
22:30	23:00	0.50	Wash & ream from 12315' to 12366'
23:00	0:00	1.00	Drill & survey from 12366' to 12372'
0:00			
0:00			
0:00			Bit # 27 F80YOD SMITH IDAC CODE 817 Cones are 3/4" bigger in diameter than bit # 25 & # 26
0:00			Bit # 26 TD74PHD Reed IDAC CODE 747
0:00			The reason for having to work bit # 27 from 8339' to 8347' was due to the larger size cones on it & the shanks bei
0:00			1/8" wider had to open path that bit # 25 & 26 had went threw with no drag @ the same depths worked bit # 27
0:00			Up & down from 8339' to 8347' untill drag reduced to 6,000 to go down & 6,000 to pull up threw same spot
0:00			Currently drilling @ 12409' @ 0545 hour
0:00			Mixed & pumped 50 bbl 116 vis sweep @ 12406' will have results from sweep @ 0615 hour this morning
0:00			
Daily Total		24.00	

SEE COST DETAIL PAGE UNDER SEPARATE COVER FOR ESTIMATED DRY HOLE COSTS



Engineering and Supervision		EXACT Engineering, Inc.										(918) 599-9400 office																																	
Operator: Wolverine Gas & Oil Co of Utah, LLC		DAILY DRILLING REPORT										24 hrs - midnight to midnight																																	
DATE 02/13/08		WELL Wolv Fed Arapien Valley 24-1				CONTRACTOR SST #68				COUNTY, STATE Sanpete, UT		SPUD DATE 11/9/07		API# 43-039-30030		SUPERVISOR DL Naylor- RD Rebsom																													
DAYS F/ SPUD 97		PRESENT OPERATIONS @ 2400 Hour Circ. Btms up for bit trip				TOTAL DEPTH 12,493		PROGRESS 121		DRILLING TIME 23.00		ROP 5.26		TD FORMATION Toroweap		AUTH. DEPTH 16,200																													
MUD DATA																																													
DATE/TIME 2/13-7:00am		DEPTH 12414		WT 8.5		VIS 70		PV 18		YP 32		GELS 13/20		FILTRATE 6.8		CAKE/32 1		SOLIDS 2.00		SAND tr		PH 9.9		CHLORIDES 12,500		CALCIUM 300		SALT 		LCM 															
BIT DATA																																													
BIT RUN		SIZE		MFG.		TYPE		IADC CODE		SERIAL NO.		JETS 1/32 or TFA		IN		OUT		FOOTAGE		HOURS		ROP		MTR Y/N		RPM RT-MTR		WOB		DULL GRADING															
																																IR		OR		DC		B/S		G/16		OC		REASON PLD	
30		25		8.500		STC		F470DPS		627		EB4694		3X16		12193		12206		13		1.00		13.00		N		55.00		30-40		3.0		5		bt		o		2		In		Bha	
31		26		8.500		REED		TD74PHD		747		DH1625		1-BK-2-18		12206		12366		160		19.00		8.42		Y		0-78		34-36		6.0		8		VTB		I-O		2		1/16"		P. Rate	
32		27		8.500		STC		F80YOD		817		DH1625		1-13-2-18		12366		12493		127		24.00		5.29		Y		0-78		14-34															
																								#DIV/0!																					
HYDRAULICS																		SLOW PUMP PSI																											
PUMP NO.		MANUFACTURER		LINER		STROKE LENGTH		GAL / STK 95%		SPM		GPM		AV DP		AV DC		PUMP PRESS.		MOTOR DIFF PSI				DEPTH		12410																			
1		Nat'l 10P130		5.5		10		2.94		110		323												1		500																			
2		Nat'l 10P130		5.5		10		2.94		0		0												2		500																			
3												0												3																					
										110		323		142		142		1550		125																									
DRILL STRING																		GEOLOGIC										GENERAL INFO																	
BOTTOM HOLE ASSEMBLY# 35																												RIG INFO																	
Bit																		1.00										8.500																	
VertiTrak																		30.75										7.063																	
float sub																		2.45										6.750																	
Filtersub																		5.58										6.688																	
26 spiral wt.																		795.40										5.000																	
jar																		32.62										6.500																	
4 spiral wt.																		120.95										5.000																	
TOTAL																		988.75																											
STRING WT.																		BHA WT.										PU WT.																	
290																		45,000										310																	
																												SO WT.																	
																												270																	
																												ROT. TORQUE																	
																												0																	
																												GRD. ELEVATION																	
																												5,554																	
																												GL TO KB																	
																												26																	
																												KB ELEVATION																	
																												5,580																	
																												SURF CSG																	
																												13-3/8@2017																	
																												INT CASING 1																	
																												9-5/8"@10372																	
																												INT CASING 2																	
																												(7-5/8"@14100)																	
																												PROD CSG																	
																												(TD@16200)																	
SURVEYS																																													

Engineering and Supervision		EXACT Engineering, Inc.										(918) 599-9400 office																																																																																																														
Operator: Wolverine Gas & Oil Co of Utah, LLC										DAILY DRILLING REPORT										24 hrs - midnight to midnight																																																																																																						
DATE 02/14/08		WELL Wolv Fed Arapien Valley 24-1				CONTRACTOR SST #68				COUNTY, STATE Sanpete, UT		SPUD DATE 11/9/07		API# 43-039-30030		SUPERVISOR DL Naylor- RD Rebsom																																																																																																										
DAYS F/ SPUD 98		PRESENT OPERATIONS @ 2400 Hour W&R to btm.				TOTAL DEPTH 12,493		PROGRESS 0		DRILLING TIME 0.00		ROP #DIV/0!		TD FORMATION Toroweap		AUTH. DEPTH 16,200																																																																																																										
MUD DATA																																																																																																																										
DATE/TIME 2/14-8:00am		DEPTH 12493		WT 8.6		VIS 67		PV 17		YP 35		GELS 13/21		FILTRATE 5.6		CAKE/G2 1		SOLIDS 2.50		SAND tr		PH 9.4		CHLORIDES 16,000		CALCIUM 360		SALT		LCM																																																																																												
BIT DATA																																																																																																																										
BIT RUN		SIZE		MFG.		TYPE		IADC CODE		SERIAL NO.		JETS 1/32 or TFA		IN		OUT		FOOTAGE		HOURS		ROP		MTR Y/N		RPM RT+MTR		WOB		DULL GRADING																																																																																												
																																IR		OR		DC		LOC		B/S		G/16		OC		REASON PLD																																																																												
30		25		8.500		STC		F47ODPS		627		EB4694		3X16		12193		12206		13		1.00		13.00		N		55.00		30-40		3.0		5		bt		o		2		In		Bha																																																																														
31		26		8.500		REED		TD74PHD		747		DH1625		1-BK-2-18		12206		12366		160		19.00		8.42		Y		0-78		34-36		6.0		8		VTB		I-O		2		1/16"		P. Rate																																																																														
32		27		8.500		STC		F80YOD		817		PJ7024		1-13-2-18		12366		12493		127		24.00		5.29		Y		0-78		14-34		6.0		8		VTB		I-O		3		3/16"		Torque,p/r																																																																														
33		28		8.500		STC		F80YOD		817		PJ7023		3 x 15		12493								#DIV/0!		Y		0-65		28																																																																																												
HYDRAULICS																										SLOW PUMP PSI																																																																																																
PUMP NO.		MANUFACTURER				LINER		STROKE LENGTH		GAL / STK 95%		SPM		GPM		AV DP		AV DC		PUMP PRESS.		MOTOR DIFF PSI						DEPTH		12410																																																																																												
1		Nat'l 10P130				5.5		10		2.94		104		306														1		500																																																																																												
2		Nat'l 10P130				5.5		10		2.94		0		0														2		500																																																																																												
3														0														3																																																																																														
												104		306		142		142		1400		125																																																																																																				
DRILL STRING													GEOLOGIC										GENERAL INFO																																																																																																			
BOTTOM HOLE ASSEMBLY# 37													LENGTH										O.D.										I.D.																																																																																									
Bit													1.00										8.500																																																																																																			
VertiTrak													31.75										7.063																																																																																																			
float sub													2.45										6.750										2.81																																																																																									
Filtersub													5.58										6.688										3.00																																																																																									
Filtersub													5.69										6.875										3.00																																																																																									
26 spiral wt.													795.40										5.000										3.00																																																																																									
ar													32.62										6.500										2.75																																																																																									
4 spiral wt.													120.95										5.000										3.00																																																																																									
TOTAL													995.44																																																																																																													
STRING WT.													BHA WT.										PU WT.										SO WT.										ROT. TORQUE										GRD. ELEVATION										GL TO KB										KB ELEVATION										SURF CSG										INT CASING 1										INT CASING 2										PROD CSG									
290													45,000										310										270										0										5,554										26										5,580										13-3/8@2017										9-5/8"@10372										(7-5/8"@14100)										(TD@16200)									
SURVEYS																																																																																																																										
MD		INCL.		AZIMUTH		TVD		N+/S-		E+ / W-		SECTION		DLS		TOOL		MD		INCL.		AZIMUTH		TVD		N+/S-		E+ / W-		SECTION		DLS																																																																																										

Engineering and Supervision

EXACT Engineering, Inc.

(918) 599-9400 office

Operator: Wolverine Gas &amp; Oil Co of Utah, LLC

## DAILY DRILLING REPORT

24 hrs - midnight to midnight

DATE	WELL	CONTRACTOR	COUNTY, STATE	SPUD DATE	API#	SUPERVISOR	
02/15/08	Wolv Fed Arapien Valley 24-1	SST #68	Sanpete, UT	11/9/07	43-039-30030	DL Naylor- RD Rebsom	
DAYS F/ SPUD	PRESENT OPERATIONS @ 2400 Hour	TOTAL DEPTH	PROGRESS	DRILLING TIME	ROP	TD FORMATION	AUTH. DEPTH
99	Circ. Bottoms up then trip out for bit	12,595	102	22.50	4.53	Toroweap	16,200

## MUD DATA

DATE/TIME	DEPTH	WT	VIS	PV	YP	GELS	FILTRATE	CAKE/32	SOLIDS	SAND	PH	CHLORIDES	CALCIUM	SALT	LCM
2/15-8:15am	12517	8.6	63	18	33	13/20	6.0	1	2.50	tr	9.9	15,800	350		

## BIT DATA

BIT RUN	BIT NO	SIZE	MFG.	TYPE	IADC CODE	SERIAL NO.	JETS 1/32 or TFA	IN	OUT	FOOTAGE	HOURS	ROP	MTR Y/N	RPM RT+MTR	WOB	DULL GRADING									
																IR	CR	DC	LOC	B/S	G/16	OC	REASON PLD		
30	25	8.500	STC	F47ODPS	627	EB4694	3X16	12193	12206	13	1.00	13.00	N	55.00	30-40	3.0	5	bt	o	2	In		Bha		
31	26	8.500	REED	TD74PHD	747	DH1625	1-BK-2-18	12206	12366	160	19.00	8.42	Y	0-78	34-36	6.0	8	VTB	I-O	2	1/16"		P. Rate		
32	27	8.500	STC	F80YOD	817	PJ7024	1-13-2-18	12366	12493	127	24.00	5.29	Y	0-78	14-34	6.0	8	VTB	I-O	3	3/16		Torque,p/r		
33	28	8.500	STC	F80YOD	817	PJ7023	3 x 15	12493	12595	102	22.50	4.53	Y	0-76	26-37								Torque,p/r		

## HYDRAULICS

PUMP NO.	MANUFACTURER	LINER	STROKE LENGTH	GAL / STK 95%	SPM	GPM	AV DP	AV DC	PUMP PRESS.	MOTOR DIFF PSI	DEPTH	12545		
1	Nat'l 10P130	5.5	10	2.94	110	323					1	500		
2	Nat'l 10P130	5.5	10	2.94	0	0					2	500		
3					0	0					3			
					110	323	142	142	1525	85-125				

## SLOW PUMP PSI

DRILL STRING					GEOLOGIC					GENERAL INFO			
BOTTOM HOLE ASSEMBLY# 37		LENGTH	O.D.	I.D.	CONFIDENTIAL REPORT					RIG INFO			
Bit		1.00	8.500	Co Man						435-979-2202			
VertiTrak		31.75	7.063	Mudlogger						435-979-6005			
				Toolpusher						435-979-0544			
float sub		2.45	6.750	Last BOP Test						1/22			
Filtersub		5.58	6.688	Next BOP Test						2/21			
Filtersub		5.69	6.875	Last Safety Meeting						2/15			
26 spiral wt.		795.40	5.000	Last BOP Drill						2/14			
jar		32.62	6.500	Last Operate Pipe Rams						2/14			
4 spiral wt.		120.95	5.000	Last Operate Blind Rams						2/14			
TOTAL		995.44								Last Operate Annular		2/14	
STRING WT.	BHA WT.	PU WT.	SO WT.	ROT. TORQUE	GRD. ELEVATION	GL TO KB	KB ELEVATION	SURF CSG	INT CASING 1	INT CASING 2	PROD CSG		
292,000	45,000	315,000	271,000	0	5,554	26	5,580	13-3/8@2017	9-5/8"@10372	(7-5/8"@14100)	(TD@16200)		

## SURVEYS

MD	INCL.	AZIMUTH	TVD	N+S-	E+/W-	SECTION	DLS	TOOL	MD	INCL.	AZIMUTH	TVD	N+S-	E+/W-	SECTION	DLS	TOOL

## DAILY ACTIVITY

FROM	TO	HRS	LAST 24 HOURS:
0:00	22:30	22.50	Drill & survey from 12493' to 12595'
22:30	0:00	1.50	Circ. Bottoms up to trip out for bit
0:00			
0:00			
0:00			
0:00			
0:00			
0:00			Mixed & pumped 80 bbl 108 vis sweep @ 12558' brought back very few extra cuttings
0:00			
0:00			
0:00			
0:00			12595' trip out @ 10238' draining kelly hose--had top drive troubles--every thing is back operating @ 0445 hour
0:00			
0:00			
0:00			
0:00			
0:00			
0:00			
0:00			
0:00			
Daily Total		24.00	

SEE COST DETAIL PAGE UNDER SEPARATE COVER FOR ESTIMATED DRY HOLE COSTS

Engineering and Supervision

## EXACT Engineering, Inc.

(918) 599-9400 office

Operator: Wolverine Gas &amp; Oil Co of Utah, LLC

## DAILY DRILLING REPORT

24 hrs - midnight to midnight

DATE	WELL	CONTRACTOR	COUNTY, STATE	SPUD DATE	API#	SUPERVISOR	
02/16/08	Wolv Fed Arapien Valley 24-1	SST #68	Sanpete, UT	11/9/07	43-039-30030	DL Naylor- RD Rebsom	
DAYS F/ SPUD	PRESENT OPERATIONS @ 2400 Hour	TOTAL DEPTH	PROGRESS	DRILLING TIME	ROP	TD FORMATION	AUTH. DEPTH
100	Drilling	12,641	46	5.50	8.36	Toroweap	16,200

## MUD DATA

DATE/TIME	DEPTH	WT	VIS	PV	YP	GELS	FILTRATE	CAKE/32	SOLIDS	SAND	PH	CHLORIDES	CALCIUM	SALT	LCM
2/16-8:30am	12595	8.6	78	19	36	14/22	5.6	1	2.50	tr	9.5	16,500	380		

## BIT DATA

BIT RUN	BIT NO	SIZE	MFG.	TYPE	IADC CODE	SERIAL NO.	JETS 1/32 or TFA	IN	OUT	FOOTAGE	HOURS	ROP	MTR Y/N	RPM RT+MTR	WOB	DULL GRADING									
																IR	OR	DC	LOC	B/S	G/16	OC	REASON PLD		
33	28	8.500	STC	F80YOD	817	PJ7023	3X15	12493	12595	102	22.50	4.53	Y.	0-78	24-35	7.0	8	BT	A	E	1/16"	P.Rate-Pres			
34	29	8.500	STC	F80YOD	817	PG4038	2X18-1 BK	12595		46	5.00	9.20	Y.	0-70	22-26										
												#DIV/0!													
												#DIV/0!													

## HYDRAULICS

## SLOW PUMP PSI

PUMP NO.	MANUFACTURER	LINER	STROKE LENGTH	GAL / STK 95%	SPM	GPM	AV DP	AV DC	PUMP PRESS.	MOTOR DIFF PSI	DEPTH	12603		
1	Nat'l 10P130	5.5	10	2.94	102	300					1	475		
2	Nat'l 10P130	5.5	10	2.94	0	0					2	475		
3					0	0					3			
					102	300	126	126	1400	85-125				

## DRILL STRING

## GEOLOGIC

## GENERAL INFO

BOTTOM HOLE ASSEMBLY# 38		LENGTH	O.D.	I.D.	<div>CONFIDENTIAL REPORT</div>	RIG INFO					
Bit		1.00	8.500			Co Man		435-979-2202			
VertiTrak		31.75	7.063			Mudlogger		435-979-6005			
						Toolpusher		435-979-0544			
float sub		2.45	6.750	2.81		Last BOP Test		1/22			
Filtersub		5.58	6.688	3.00		Next BOP Test		2/21			
Filtersub		5.69	6.875	3.00		Last Safety Meeting		2/16			
26 spiral wt.		795.40	5.000	3.00		Last BOP Drill		2/14			
jar		32.62	6.500	2.75		Last Operate Pipe Rams		2/14			
4 spiral wt.		120.95	5.000	3.00		Last Operate Blind Rams		2/16			
TOTAL		995.44				Last Operate Annular		2/14			
STRING WT.	BHA WT.	PU WT.	SO WT.	ROT. TORQUE		GRD. ELEVATION	GL TO KB	KB ELEVATION	SURF CSG	INT CASING 1	INT CASING 2
293	45,000	316	273	0	5,554	26	5,580	13-3/8@2017	9-5/8"@10372	(7-5/8"@14100)	(TD@16200)

## SURVEYS

MD	INCL.	AZIMUTH	TVD	N+S	E+ / W-	SECTION	DLS	TOOL	MD	INCL.	AZIMUTH	TVD	N+S	E+ / W-	SECTION	DLS	TOOL

## DAILY ACTIVITY

FROM	TO	HRS	LAST 24 HOURS:
0:00	:30	0.50	Circ. Shakers clean
:30	1:30	1.00	Pump out 6 stands
1:30	3:00	1.50	Quick coupler blew apart on hyd. Hose on top drive change grabber dies
3:00	9:00	6.00	Pump pill blow kelly hose dry trip out for bit
9:00	10:30	1.50	Work blind rams-change bits-clean filter sub-service rig-top drive
10:30	14:30	4.00	Trip into 10239'
14:30	16:00	1.50	Slip & cut 150' drlg line
16:00	17:00	1.00	Bleed air out of hyd. Lines on top drive-trip into 12523'
17:00	18:30	1.50	Wash & ream 12523' to 12595' clean bottom
18:30	0:00	5.50	Drill from 12595' to 12641'
0:00			
0:00			
0:00			
0:00			On trip out pulled tight @ 8347' set back down turn 1/8 turn repeat on the 4th try it pulled up threw 6-8000 over str
0:00			Wt. on trip in took wt. @ 8339' pull up turn 1/8 turn repeat on 8th try it went down with 8-10000 set down wt.
0:00			
0:00			
0:00			
0:00			6:30 am drilling @ 12690
0:00			
Daily Total		24.00	

SEE COST DETAIL PAGE UNDER SEPARATE COVER FOR ESTIMATED DRY HOLE COSTS

Engineering and Supervision

EXACT Engineering, Inc.

(918) 599-9400 office

Operator: Wolverine Gas &amp; Oil Co of Utah, LLC

## DAILY DRILLING REPORT

24 hrs - midnight to midnight

DATE	WELL	CONTRACTOR	COUNTY, STATE	SPUD DATE	API#	SUPERVISOR	
02/17/08	Wolv Fed Arapien Valley 24-1	SST #68	Sanpete, UT	11/9/07	43-039-30030	DL Naylor- RD Rebsom	
DAYS F/ SPUD	PRESENT OPERATIONS @ 2400 Hour	TOTAL DEPTH	PROGRESS	DRILLING TIME	ROP	TD FORMATION	AUTH. DEPTH
101	Trip for bit	12,768	127	19.00	6.68	Toroweap	16,200

## MUD DATA

DATE/TIME	DEPTH	WT	VIS	PV	YP	GELS	FILTRATE	CAKE/32	SOLIDS	SAND	PH	CHLORIDES	CALCIUM	SALT	LCM
2/17-8:30am	12595	8.6	68	15	42	15/23	5.8	1	2.50	tr	9.5	16,500	400		

## BIT DATA

BIT RUN	BIT NO	SIZE	MFG.	TYPE	IADC CODE	SERIAL NO.	JETS 1/32 or TFA	IN	OUT	FOOTAGE	HOURS	ROP	MTR Y/N	RPM RT+MTR	WOB	DULL GRADING							
																IR	OR	DC	LOC	B/S	G/16	OC	REASON PLD
33	28	8.500	STC	F80YOD	817	PJ7023	3X15	12493	12595	102	22.50	4.53	Y.	0-78	24-35	7.0	8	BT	A	E	1/16"		P.Rate-Pres
34	29	8.500	STC	F80YOD	817	PG4038	2X18-1 BK	12595	12768	173	24.50	7.06	Y.	0-78	22-30								
												#DIV/0!											
												#DIV/0!											

## HYDRAULICS

## SLOW PUMP PSI

PUMP NO.	MANUFACTURER	LINER	STROKE LENGTH	GAL / STK 95%	SPM	GPM	AV DP	AV DC	PUMP PRESS.	MOTOR DIFF PSI	DEPTH	12603	
1	Nat'l 10P130	5.5	10	2.94	111	326					1	475	
2	Nat'l 10P130	5.5	10	2.94	0	0					2	475	
3					0	0					3		
					111	326	143	143	1625	125-150			

## DRILL STRING

## GEOLOGIC

## GENERAL INFO

BOTTOM HOLE ASSEMBLY#	38	LENGTH	O.D.	I.D.	CONFIDENTIAL REPORT										RIG INFO			
Bit		1.00	8.500												Co Man	435-979-2202		
VertiTrak		31.75	7.063												Mudlogger	435-979-6005		
															Toolpusher	435-979-0544		
float sub		2.45	6.750	2.81											Last BOP Test	1/22		
Filtersub		5.58	6.688	3.00											Next BOP Test	2/21		
Filtersub		5.69	6.875	3.00											Last Safety Meeting	2/17		
26 spiral wt.		795.40	5.000	3.00											Last BOP Drill	2/14		
jar		32.62	6.500	2.75											Last Operate Pipe Rams	2/14		
4 spiral wt.		120.95	5.000	3.00											Last Operate Blind Rams	2/16		
TOTAL		995.44													Last Operate Annular	2/14		
STRING WT.	BHA WT.	PU WT.	SO WT.	ROT. TORQUE	GRD. ELEVATION	GL TO KB	KB ELEVATION	SURF CSG	INT CASING 1	INT CASING 2	PROD CSG							
295,000	45,000	318,000	275,000	0	5,554	26	5,580	13-3/8@2017	9-5/8"@10372	(7-5/8"@14100)	(TD@16200)							

## SURVEYS

MD	INCL.	AZIMUTH	TVD	N-/S-	E-/W-	SECTION	DLS	TOOL	MD	INCL.	AZIMUTH	TVD	N-/S-	E-/W-	SECTION	DLS	TOOL

## DAILY ACTIVITY

FROM	TO	HRS	LAST 24 HOURS:
0:00	19:00	19.00	Drill & survey from 12641' to 12768'
19:00	21:00	2.00	Circ. Bottoms up & clean shakers
21:00	0:00	3.00	Trip out to 10286' --- pump pill --- blow kelly hose dry --- trip out
0:00			
0:00			
0:00			
0:00			
0:00			
0:00			Pumped 80 bbls 103 vis sweep @ 12710' brought back approx. 1/8 yard of small pee size cuttings
0:00			Pumped 40 bbls 107 vis sweep @ 12730' brought back very few extra cuttings
0:00			
0:00			
0:00			Trip out from 12786' to shoe did not half to use pump
0:00			
0:00			At 8347' pulled tight set down turn 1/8 turn repeat on fourth try pulled threw with 8-10,000 over string wt.
0:00			
0:00			
0:00			12768' trip out @ 0400 hour
0:00			
0:00			
Daily Total		24.00	

SEE COST DETAIL PAGE UNDER SEPARATE COVER FOR ESTIMATED DRY HOLE COSTS

CONFIDENTIAL

24 2008 1e

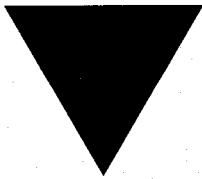
Engineering and Supervision				EXACT Engineering, Inc.				(918) 599-9400 office															
Operator: Wolverine Gas & Oil Co of Utah, LLC				DAILY DRILLING REPORT				24 hrs - midnight to midnight															
DATE	WELL	CONTRACTOR	COUNTY, STATE	SPUD DATE	API#	SUPERVISOR																	
02/18/08	Wolv Fed Arapien Valley 24-1	SST #68	Sanpete, UT	11/9/07	43-039-30030	DL Naylor- RD Rebsom																	
DAYS F/ SPUD	PRESENT OPERATIONS @ 2400 Hour	TOTAL DEPTH	PROGRESS	DRILLING TIME	ROP	TD FORMATION	AUTH. DEPTH																
102	Drilling	12,835	67	9.50	7.05	Toroweap	16,200																
MUD DATA																							
DATE/TIME	DEPTH	WT	VIS	PV	YP	GELS	FILTRATE	CAKE/32	SOLIDS	SAND	PH	CHLORIDES	CALCIUM	SALT	LCM								
2/18-8:30am	12768	8.6	76	18	36	13/20	5.6	1	2.50	tr	9.9	16,000	360										
BIT DATA																							
BIT RUN	BIT NO	SIZE	MFG.	TYPE	IADC CODE	SERIAL NO.	JETS 1/32 or TFA	IN	OUT	FOOTAGE	HOURS	ROP	MTR Y/N	RPM RT-MTR	WOB	DULL GRADING							
33	28	8.500	STC	F80YOD	817	PJ7023	3X15	12493	12595	102	22.50	4.53	Y.	0-78	24-35	7.0	8 BT A E 1/16" P.Rate-Pres						
34	29	8.500	STC	F80YOD	817	PG4038	2X18-1 BK	12595	12768	173	24.50	7.06	Y.	0-78	22-30	5.0	6 WBT O-I E 1/32" P. Spikes						
35	30	8.500	STC	F80YOD	817	PF7964	2X18-1-BK	12768		67	9.50	7.05	Y.	0-78	28-35								
										#DIV/0!													
HYDRAULICS										SLOW PUMP PSI													
PUMP NO.	MANUFACTURER	LINER	STROKE LENGTH	GAL / STK 95%	SPM	GPM	AV DP	AV DC	PUMP PRESS.	MOTOR DIFF PSI	DEPTH												
1	Nat'l 10P130	5.5	10	2.94	111	326					12768												
2	Nat'l 10P130	5.5	10	2.94	0	0					50												
3					0	0					475												
					111	326	143	143	1500	100-125	475												
DRILL STRING										GEOLOGIC								GENERAL INFO					
BOTTOM HOLE ASSEMBLY# 39										CONFIDENTIAL REPORT								RIG INFO					
LENGTH		O.D.		I.D.		Co Man												435-979-2202					
1.00		8.500						Mudlogger										435-979-6005					
31.75		7.063						Toolpusher										435-979-0544					
2.45		6.750		2.81		Last BOP Test												1/22					
5.58		6.688		3.00		Next BOP Test												2/21					
5.69		6.875		3.00		Last Safety Meeting												2/18					
795.40		5.000		3.00		Last BOP Drill												2/14					
32.62		6.500		2.75		Last Operate Pipe Rams												2/14					
120.95		5.000		3.00		Last Operate Blind Rams												2/18					
TOTAL		995.44				Last Operate Annular				2/14													
STRING WT.	BHA WT.	PU WT.	SO WT.	ROT. TORQUE	GRD. ELEVATION	GL TO KB	KB ELEVATION	SURF CSG	INT CASING 1	INT CASING 2	PROD CSG												
295,000	45,000	320,000	276,000	0	5,554	26	5,580	13-3/8@2017	9-5/8"@10372	(7-5/8"@14100)	(TD@16200)												
SURVEYS																							
MD	INCL.	AZIMUTH	TVD	N+/S-	E+/W-	SECTION	DLS	TOOL	MD	INCL.	AZIMUTH	TVD	N+/S-	E+/W-	SECTION	DLS	TOOL						
DAILY ACTIVITY																							
FROM	TO	HRS	LAST 24 HOURS:																				
0:00	6:00	6.00	Trip out-work blind rams																				
6:00	7:00	1.00	Change bit-clean filter screens--check VertiTrak--service rig--top drive																				
7:00	11:30	4.50	Trip into 12692'																				
11:30	14:30	3.00	Wash & ream from 12692' to 12768'																				
14:30	0:00	9.50	Drill & survey from 12768' to 12835'																				
0:00																							
0:00																							
0:00			Mixed & pumped 80 bbl 116 vis sweep @ 12803' brought back approx. 1/8 yard small pee size gravel & popping sh																				
0:00			Mixed & pumped 40 bbl 110 vis sweep @ 12828' brought back very few extra cuttings but some popping shale																				
0:00			Popping shale was dime to penny size real thin flakes.																				
0:00																							
0:00																							
0:00																							
0:00			On trip in @ 8339' took wt. pickup turn 1/8 turn repeat over a dozen times took 15-18,000 wt to push threw 8339-8																				
0:00																							
0:00																							
0:00			12870' Drilling @ 0530 hour																				
0:00																							
Daily Total		24.00																					

SEE COST DETAIL PAGE UNDER SEPARATE COVER FOR ESTIMATED DRY HOLE COSTS

RECEIVED

APR 09 2008

DIV. OF OIL, GAS &amp; MINING



**WOLVERINE GAS AND OIL COMPANY  
OF UTAH, LLC**

*Energy Exploration in Partnership with the Environment*

April 9, 2008

**CONFIDENTIAL**

Mr. Gil Hunt  
Utah Division of Oil, Gas and Mining  
P.O. Box 145801  
Salt Lake City, Utah 84114-5801

Re: Reporting Forms - Wolverine Gas and Oil Company of Utah, LLC  
**Wolverine Federal Arapien Valley 24-1 (UDOGM Sundry Notice)**

Dear Mr. Hunt:

Wolverine Gas and Oil Company of Utah, LLC respectfully submits the enclosed Sundry Notice (Form 9) in duplicate for the Wolverine Federal Arapien Valley 24-1 well. It is to provide updated status of activity for the well.

Please accept this letter as Wolverine's written request for continued confidential treatment of all information relating to this well.

Sincerely,

Ellis M. Peterson  
Senior Production Engineer  
Wolverine Gas and Oil

**RECEIVED**

**APR 10 2008**

**DIV. OF OIL, GAS & MINING**

STATE OF UTAH  
DEPARTMENT OF NATURAL RESOURCES  
DIVISION OF OIL, GAS AND MINING

FORM 9

SUNDRY NOTICES AND REPORTS ON WELLS

Do not use this form for proposals to drill new wells, significantly deepen existing wells below current bottom-hole depth, reenter plugged wells, or to drill horizontal laterals. Use APPLICATION FOR PERMIT TO DRILL form for such proposals.

1. TYPE OF WELL OIL WELL <input checked="" type="checkbox"/> GAS WELL <input type="checkbox"/> OTHER <input type="checkbox"/>	2. NAME OF OPERATOR: Wolverine Gas and Oil Company of Utah, LLC	3. ADDRESS OF OPERATOR: 55 Campau NW CITY Grand Rapids STATE MI ZIP 49503-2616	PHONE NUMBER: (616) 458-1150	5. LEASE DESIGNATION AND SERIAL NUMBER: UTU-80907	6. IF INDIAN, ALLOTTEE OR TRIBE NAME: NA	7. UNIT or CA AGREEMENT NAME: Wolverine Federal Unit	8. WELL NAME and NUMBER: Wolv. Fed. Arapien Valley 24-1	9. API NUMBER: 4303930030	10. FIELD AND POOL, OR WILDCAT: Wildcat
--	--	--	---------------------------------	--	---	---	--	------------------------------	--

4. LOCATION OF WELL FOOTAGES AT SURFACE: 2331' FNL, 549' FWL QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN: SWNW 24 20S 1E S	COUNTY: Sanpete STATE: UTAH
--	--------------------------------

11. CHECK APPROPRIATE BOXES TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA

TYPE OF SUBMISSION	TYPE OF ACTION		
<input type="checkbox"/> NOTICE OF INTENT (Submit in Duplicate) Approximate date work will start: _____	<input type="checkbox"/> ACIDIZE	<input type="checkbox"/> DEEPEN	<input type="checkbox"/> REPERFORATE CURRENT FORMATION
	<input type="checkbox"/> ALTER CASING	<input type="checkbox"/> FRACTURE TREAT	<input type="checkbox"/> SIDETRACK TO REPAIR WELL
	<input type="checkbox"/> CASING REPAIR	<input type="checkbox"/> NEW CONSTRUCTION	<input type="checkbox"/> TEMPORARILY ABANDON
	<input type="checkbox"/> CHANGE TO PREVIOUS PLANS	<input type="checkbox"/> OPERATOR CHANGE	<input type="checkbox"/> TUBING REPAIR
	<input type="checkbox"/> CHANGE TUBING	<input type="checkbox"/> PLUG AND ABANDON	<input type="checkbox"/> VENT OR FLARE
<input checked="" type="checkbox"/> SUBSEQUENT REPORT (Submit Original Form Only) Date of work completion: _____	<input type="checkbox"/> CHANGE WELL NAME	<input type="checkbox"/> PLUG BACK	<input type="checkbox"/> WATER DISPOSAL
	<input type="checkbox"/> CHANGE WELL STATUS	<input type="checkbox"/> PRODUCTION (START/RESUME)	<input type="checkbox"/> WATER SHUT-OFF
	<input type="checkbox"/> COMMINGLE PRODUCING FORMATIONS	<input type="checkbox"/> RECLAMATION OF WELL SITE	<input checked="" type="checkbox"/> OTHER: Activity Update
	<input type="checkbox"/> CONVERT WELL TYPE	<input type="checkbox"/> RECOMPLETE - DIFFERENT FORMATION	

12. DESCRIBE PROPOSED OR COMPLETED OPERATIONS. Clearly show all pertinent details including dates, depths, volumes, etc.

The drilling rig was released on 2/28/2008 and moved off location. The location was prepared for completion activities and construction of a temporary production testing facility was initiated. A completion rig moved to the well on 4/7/2008 and is currently drilling out the stage collar and cement in preparation of perforating and testing.

NAME (PLEASE PRINT) Ellis M. Peterson	TITLE Senior Production Engineer
SIGNATURE 	DATE 4/9/2008

(This space for State use only)

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APR 10 2008

DIV. OF OIL, GAS & MINING



CONFIDENTIAL

FORM 9

**STATE OF UTAH**  
DEPARTMENT OF NATURAL RESOURCES  
DIVISION OF OIL, GAS AND MINING

<b>SUNDRY NOTICES AND REPORTS ON WELLS</b>		5. LEASE DESIGNATION AND SERIAL NUMBER: <b>UTU-80907</b>
Do not use this form for proposals to drill new wells, significantly deepen existing wells below current bottom-hole depth, reenter plugged wells, or to drill horizontal laterals. Use APPLICATION FOR PERMIT TO DRILL form for such proposals.		6. IF INDIAN, ALLOTTEE OR TRIBE NAME: <b>NA</b>
1. TYPE OF WELL OIL WELL <input checked="" type="checkbox"/> GAS WELL <input type="checkbox"/> OTHER _____		7. UNIT or CA AGREEMENT NAME: <b>Wolverine Federal Unit</b>
2. NAME OF OPERATOR: <b>Wolverine Gas and Oil Company of Utah, LLC</b>		8. WELL NAME and NUMBER: <b>Wolv. Fed. Arapien Valley 24-1</b>
3. ADDRESS OF OPERATOR: <b>55 Campau NW</b> CITY <b>Grand Rapids</b> STATE <b>MI</b> ZIP <b>49503-2616</b>		9. API NUMBER: <b>4303930030</b>
4. LOCATION OF WELL FOOTAGES AT SURFACE: <b>2331' FNL, 549' FWL</b>		10. FIELD AND POOL, OR WILDCAT: <b>Wildcat</b>
QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN: <b>SWNW 24 20S 1E S</b>		COUNTY: <b>Sanpete</b>  STATE: <b>UTAH</b>

11. CHECK APPROPRIATE BOXES TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA			
TYPE OF SUBMISSION	TYPE OF ACTION		
<input type="checkbox"/> NOTICE OF INTENT (Submit in Duplicate)  Approximate date work will start: _____	<input type="checkbox"/> ACIDIZE <input type="checkbox"/> ALTER CASING <input type="checkbox"/> CASING REPAIR <input type="checkbox"/> CHANGE TO PREVIOUS PLANS <input type="checkbox"/> CHANGE TUBING <input type="checkbox"/> CHANGE WELL NAME <input type="checkbox"/> CHANGE WELL STATUS <input type="checkbox"/> COMMINGLE PRODUCING FORMATIONS <input type="checkbox"/> CONVERT WELL TYPE	<input type="checkbox"/> DEEPEN <input type="checkbox"/> FRACTURE TREAT <input type="checkbox"/> NEW CONSTRUCTION <input type="checkbox"/> OPERATOR CHANGE <input type="checkbox"/> PLUG AND ABANDON <input type="checkbox"/> PLUG BACK <input type="checkbox"/> PRODUCTION (START/RESUME) <input type="checkbox"/> RECLAMATION OF WELL SITE <input type="checkbox"/> RECOMPLETE - DIFFERENT FORMATION	<input type="checkbox"/> REPERFORATE CURRENT FORMATION <input type="checkbox"/> SIDETRACK TO REPAIR WELL <input type="checkbox"/> TEMPORARILY ABANDON <input type="checkbox"/> TUBING REPAIR <input type="checkbox"/> VENT OR FLARE <input type="checkbox"/> WATER DISPOSAL <input type="checkbox"/> WATER SHUT-OFF <input checked="" type="checkbox"/> OTHER: <u>Activity Update</u>

12. DESCRIBE PROPOSED OR COMPLETED OPERATIONS. Clearly show all pertinent details including dates, depths, volumes, etc.

The drilling rig was released on 2/28/2008 and moved off location. The location was prepared for completion activities and a temporary production testing facility was constructed. A completion rig moved to the well on 4/7/2008. The stage collar and cement were drilled out, a CBL was run, and perforations were shot 6 SPF at 12,373' - 12,380'. There were indications of an unknown quantity of Hydrogen Sulfide (H<sub>2</sub>S) in the gas initially produced from the perforated interval so the well was immediately shut in. Production testing will resume after safety equipment and training are complete and facilities are modified as necessary. Actual H<sub>2</sub>S concentration will be measured and reported after production testing resumes.

NAME (PLEASE PRINT) <u>Ellis M. Peterson</u>	TITLE <u>Senior Production Engineer</u>
SIGNATURE 	DATE <u>4/24/2008</u>

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**RECEIVED****MAY 01 2008**

DIV. OF OIL, GAS &amp; MINING



**WOLVERINE GAS AND OIL COMPANY  
OF UTAH, LLC**

*Energy Exploration in Partnership with the Environment*

April 29, 2008

Al McKee  
BLM Utah State Office  
PO Box 45155  
Salt Lake City, Utah 84145-0155  
United States of America

RE: Sundry Notice - Wolverine Gas and Oil Company of Utah, LLC  
**Wolverine Federal Arapien Valley 24-1**  
Covenant Field, Sanpete County, Utah

Dear Mr. McKee,

Wolverine Gas and Oil Company of Utah, LLC (Wolverine) respectfully submits the enclosed Sundry Notice in triplicate as a 5-Day production notice for the subject well. The Sundry Notice also addresses gas flaring, the presence of Hydrogen Sulfide gas, and immediate plans related to testing of the subject well.

Please accept this letter as Wolverine's written request for continued confidential treatment of all information relating to this well. Feel free to contact me at (616) 458-1150 if you have any questions or need additional information.

Sincerely,

Ellis Peterson  
Sr. Production Engineer  
Wolverine Gas and Oil Company of Utah, LLC

cc w/ attachment: Gil Hunt, UDOGM

**RECEIVED**

**MAY 05 2008**

**DIV. OF OIL, GAS & MINING**

UNITED STATES  
DEPARTMENT OF THE INTERIOR  
BUREAU OF LAND MANAGEMENT

FORM APPROVED  
OMB No. 1004-0137  
Expires: March 31, 2007

**SUNDRY NOTICES AND REPORTS ON WELLS**

*Do not use this form for proposals to drill or to re-enter an abandoned well. Use Form 3160-3 (APD) for such proposals.*

**SUBMIT IN TRIPLICATE- Other instructions on reverse side.**

1. Type of Well  
☒ Oil Well ☐ Gas Well ☐ Other

2. Name of Operator **Wolverine Gas and Oil Company of Utah, LLC**

3a. Address  
**55 Campau NW, Grand Rapids, MI 49503**

3b. Phone No. (include area code)  
**616-458-1150**

4. Location of Well (Footage, Sec., T., R., M., or Survey Description)  
**2331' FNL, 549' FWL, Sec. 24, T20S, R1E, SLB&M**

5. Lease Serial No.  
**UTU-80907**

6. If Indian, Allottee or Tribe Name  
**NA**

7. If Unit or CA/Agreement, Name and/or No.  
**Wolverine Unit**

8. Well Name and No.  
**Wolverine Federal Arapien Valley 24-1**

9. API Well No.  
**43-039-30030**

10. Field and Pool, or Exploratory Area  
**Wildcat**

11. County or Parish, State  
**Sanpete County, Utah**

**12. CHECK APPROPRIATE BOX(ES) TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA**

TYPE OF SUBMISSION	TYPE OF ACTION			
<input type="checkbox"/> Notice of Intent	<input type="checkbox"/> Acidize	<input type="checkbox"/> Deepen	<input checked="" type="checkbox"/> Production (Start/Resume)	<input type="checkbox"/> Water Shut-Off
<input checked="" type="checkbox"/> Subsequent Report	<input type="checkbox"/> Alter Casing	<input type="checkbox"/> Fracture Treat	<input type="checkbox"/> Reclamation	<input type="checkbox"/> Well Integrity
<input type="checkbox"/> Final Abandonment Notice	<input type="checkbox"/> Casing Repair	<input type="checkbox"/> New Construction	<input type="checkbox"/> Recomplete	<input type="checkbox"/> Other
	<input type="checkbox"/> Change Plans	<input type="checkbox"/> Plug and Abandon	<input type="checkbox"/> Temporarily Abandon	
	<input type="checkbox"/> Convert to Injection	<input type="checkbox"/> Plug Back	<input type="checkbox"/> Water Disposal	

13. Describe Proposed or Completed Operation (clearly state all pertinent details, including estimated starting date of any proposed work and approximate duration thereof. If the proposal is to deepen directionally or recompleat horizontally, give subsurface locations and measured and true vertical depths of all pertinent markers and zones. Attach the Bond under which the work will be performed or provide the Bond No. on file with BLM/BIA. Required subsequent reports shall be filed within 30 days following completion of the involved operations. If the operation results in a multiple completion or recompleat in a new interval, a Form 3160-4 shall be filed once testing has been completed. Final Abandonment Notices shall be filed only after all requirements, including reclamation, have been completed, and the operator has determined that the site is ready for final inspection.)

Oil production in saleable quantities was recovered during testing of a perforated interval at 12,373' - 12,380' in the Navajo2 Formation (Subthrust and below Kaibab Formation) on April 25, 2008. Field measurements indicate that the Oil gravity was 54 degrees API and that the associated gas had Hydrogen Sulfide content of approximately 700 ppm. Approximately 284 MCF of gas was flared during the 16-hour flow test. Operations are now in progress to isolate the perforations at 12,373' - 12,380' below a CIBP to be set at 12,369', and to dump bail 2 sacks of cement on top of the CIBP. It is then planned to perforate and flow test another Navajo2 interval at 12,290' - 12,316'.

**COPY SENT TO OPERATOR**

Date: **5-28-2008**  
Initials: **KS**

Accepted by the  
Utah Division of  
Oil, Gas and Mining

Federal Approval Of This  
Action Is Necessary

Date: **5/23/08**  
By: *[Signature]*

**RECEIVED**  
**MAY 05 2008**

14. I hereby certify that the foregoing is true and correct  
Name (Printed/Typed)

**Ellis Peterson**

Title **Sr. Production Engineer**

Signature

*[Signature]*

Date

**04/29/2008**

**DIV. OF OIL, GAS & MINING**

**THIS SPACE FOR FEDERAL OR STATE OFFICE USE**

Approved by

Conditions of approval, if any, are attached. Approval of this notice does not warrant or certify that the applicant holds legal or equitable title to those rights in the subject lease which would entitle the applicant to conduct operations thereon.

Title

Date

Office

Title 18 U.S.C. Section 1001 and Title 43 U.S.C. Section 1212, make it a crime for any person knowingly and willfully to make to any department or agency of the United States any false, fictitious or fraudulent statements or representations as to any matter within its jurisdiction.

(Instructions on page 2)

**STATE OF UTAH**  
DEPARTMENT OF NATURAL RESOURCES  
DIVISION OF OIL, GAS AND MINING

**SUNDRY NOTICES AND REPORTS ON WELLS**

Do not use this form for proposals to drill new wells, significantly deepen existing wells below current bottom-hole depth, reenter plugged wells, or to drill horizontal laterals. Use APPLICATION FOR PERMIT TO DRILL form for such proposals.

1. TYPE OF WELL OIL WELL <input checked="" type="checkbox"/> GAS WELL <input type="checkbox"/> OTHER _____		5. LEASE DESIGNATION AND SERIAL NUMBER: UTU-80907
2. NAME OF OPERATOR: Wolverine Gas and Oil Company of Utah, LLC		6. IF INDIAN, ALLOTTEE OR TRIBE NAME: NA
3. ADDRESS OF OPERATOR: 55 Campau NW CITY Grand Rapids STATE MI ZIP 49503-2616		7. UNIT or CA AGREEMENT NAME: Wolverine Federal Unit
PHONE NUMBER: (616) 458-1150		8. WELL NAME and NUMBER: Wolv. Fed. Arapien Valley 24-1
4. LOCATION OF WELL FOOTAGES AT SURFACE: 2331' FNL, 549' FWL		9. API NUMBER: 4303930030
QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN: SWNW 24 20S 1E S		10. FIELD AND POOL, OR WILDCAT: Wildcat
COUNTY: Sanpete		STATE: UTAH

11. CHECK APPROPRIATE BOXES TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA

TYPE OF SUBMISSION	TYPE OF ACTION		
<input type="checkbox"/> NOTICE OF INTENT (Submit in Duplicate) Approximate date work will start: _____	<input type="checkbox"/> ACIDIZE	<input type="checkbox"/> DEEPEN	<input type="checkbox"/> REPERFORATE CURRENT FORMATION
	<input type="checkbox"/> ALTER CASING	<input type="checkbox"/> FRACTURE TREAT	<input type="checkbox"/> SIDETRACK TO REPAIR WELL
	<input type="checkbox"/> CASING REPAIR	<input type="checkbox"/> NEW CONSTRUCTION	<input type="checkbox"/> TEMPORARILY ABANDON
	<input type="checkbox"/> CHANGE TO PREVIOUS PLANS	<input type="checkbox"/> OPERATOR CHANGE	<input type="checkbox"/> TUBING REPAIR
	<input type="checkbox"/> CHANGE TUBING	<input type="checkbox"/> PLUG AND ABANDON	<input type="checkbox"/> VENT OR FLARE
<input checked="" type="checkbox"/> SUBSEQUENT REPORT (Submit Original Form Only) Date of work completion: _____	<input type="checkbox"/> CHANGE WELL NAME	<input type="checkbox"/> PLUG BACK	<input type="checkbox"/> WATER DISPOSAL
	<input type="checkbox"/> CHANGE WELL STATUS	<input type="checkbox"/> PRODUCTION (START/RESUME)	<input type="checkbox"/> WATER SHUT-OFF
	<input type="checkbox"/> COMMINGLE PRODUCING FORMATIONS	<input type="checkbox"/> RECLAMATION OF WELL SITE	<input checked="" type="checkbox"/> OTHER: Activity Update
	<input type="checkbox"/> CONVERT WELL TYPE	<input type="checkbox"/> RECOMPLETE - DIFFERENT FORMATION	

12. DESCRIBE PROPOSED OR COMPLETED OPERATIONS. Clearly show all pertinent details including dates, depths, volumes, etc.

The drilling rig was released on 2/28/2008 and moved off location. Testing and completion activities are now in progress. A CIBP was set at 12,369' and 2 sacks of cement were dumped on the CIBP. TCP guns were used to perforate 12,290' - 12,316' with 6 SPF. After flow testing for 5 days, obtaining pressure data, and collecting fluid samples, a CIBP was set at 12,280' and 6.2 Bbls ( 280' plug) of Class "G" cement containing 20% silica flour were placed on top of the CIBP. Gas produced in association with oil from perforations at 12,290' - 12,316' contained 0.079% H<sub>2</sub>S. Another CIBP was set at 9418' and 2 sacks of cement were dumped on top of the CIBP. TCP guns were used to perforate 9217' - 9222' with 6 SPF and the interval was flow tested. A CICR was set at 9205' and the perforations at 9217' - 9222' were squeezed using 50 sacks of Class G" cement.

NAME (PLEASE PRINT) <u>Ellis M. Peterson</u>	TITLE <u>Senior Production Engineer</u>
SIGNATURE <u><i>Ellis M. Peterson</i></u>	DATE <u>6/2/2008</u>

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DIV. OF OIL, GAS & MINING

STATE OF UTAH  
DEPARTMENT OF NATURAL RESOURCES  
DIVISION OF OIL, GAS AND MINING

FORM 9

CONFIDENTIAL

5. LEASE DESIGNATION AND SERIAL NUMBER:  
UTU-80907

**SUNDRY NOTICES AND REPORTS ON WELLS**

Do not use this form for proposals to drill new wells, significantly deepen existing wells below current bottom-hole depth, reenter plugged wells, or to drill horizontal laterals. Use APPLICATION FOR PERMIT TO DRILL form for such proposals.

1. TYPE OF WELL OIL WELL ☒ GAS WELL ☐ OTHER \_\_\_\_\_

6. IF INDIAN, ALLOTTEE OR TRIBE NAME:  
NA

2. NAME OF OPERATOR:  
Wolverine Gas and Oil Company of Utah, LLC

7. UNIT or CA AGREEMENT NAME:  
Wolverine Federal Unit

3. ADDRESS OF OPERATOR:  
55 Campau NW CITY Grand Rapids STATE MI ZIP 49503-2616

PHONE NUMBER:  
(616) 458-1150

8. WELL NAME and NUMBER:  
Wolv. Fed. Arapien Valley 24-1

9. API NUMBER:  
4303930030

4. LOCATION OF WELL

FOOTAGES AT SURFACE: 2331' FNL, 549' FWL

COUNTY: Sanpete

QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN: SWNW 24 20S 1E S

STATE:

UTAH

11. CHECK APPROPRIATE BOXES TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA

TYPE OF SUBMISSION	TYPE OF ACTION		
<input type="checkbox"/> NOTICE OF INTENT (Submit in Duplicate) Approximate date work will start: _____	<input type="checkbox"/> ACIDIZE	<input type="checkbox"/> DEEPEN	<input type="checkbox"/> REPERFORATE CURRENT FORMATION
	<input type="checkbox"/> ALTER CASING	<input type="checkbox"/> FRACTURE TREAT	<input type="checkbox"/> SIDETRACK TO REPAIR WELL
	<input type="checkbox"/> CASING REPAIR	<input type="checkbox"/> NEW CONSTRUCTION	<input type="checkbox"/> TEMPORARILY ABANDON
	<input type="checkbox"/> CHANGE TO PREVIOUS PLANS	<input type="checkbox"/> OPERATOR CHANGE	<input type="checkbox"/> TUBING REPAIR
	<input type="checkbox"/> CHANGE TUBING	<input type="checkbox"/> PLUG AND ABANDON	<input type="checkbox"/> VENT OR FLARE
<input checked="" type="checkbox"/> SUBSEQUENT REPORT (Submit Original Form Only) Date of work completion: _____	<input type="checkbox"/> CHANGE WELL NAME	<input type="checkbox"/> PLUG BACK	<input type="checkbox"/> WATER DISPOSAL
	<input type="checkbox"/> CHANGE WELL STATUS	<input type="checkbox"/> PRODUCTION (START/RESUME)	<input type="checkbox"/> WATER SHUT-OFF
	<input type="checkbox"/> COMMINGLE PRODUCING FORMATIONS	<input type="checkbox"/> RECLAMATION OF WELL SITE	<input checked="" type="checkbox"/> OTHER: Activity Update
	<input type="checkbox"/> CONVERT WELL TYPE	<input type="checkbox"/> RECOMPLETE - DIFFERENT FORMATION	

12. DESCRIBE PROPOSED OR COMPLETED OPERATIONS. Clearly show all pertinent details including dates, depths, volumes, etc.

The drilling rig was released on 2/28/2008 and moved off location. Testing and completion activities are now in progress. The Navajo1 was perforated with 6 SPF at 9145'- 9154' and 9160'- 9166', a breakdown using ball sealers and treated water was performed, and the perforated interval was flow tested with final rates of 150 BOPD, 72 BWPD, and 713 MCFD at a flowing THP of 360 psi. An RBP was set at 9138'. The Navajo1 was perforated with 6 SPF at 9104'- 9131' and the interval was flow tested with a last reported producing rates of 114 BOPD, 122 BWPD, and 699 MCFD at a flowing THP of 195 psi. A breakdown using ball sealers and treated water was performed on the perforations at 9104'- 9131' and the interval continues to be flow tested.

NAME (PLEASE PRINT) Ellis M. Peterson

TITLE Senior Production Engineer

SIGNATURE

DATE 6/27/2008

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JUN 30 2008

DIV. OF OIL, GAS & MINING

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## Drilling company may have struck oil in Sanpete County

July 27, 2008



While the price of oil is retreating, oil and the price of it remains a big topic of conversation these days, and talk of oil is growing in Central Utah, where word is that a major oil reserve has been discovered.

We reported back in April that a drill rig in Central Utah may have hit oil. Those who really know the status of the well won't talk about it, but from Chopper Five we were able to see something is happening at the site.

Where an oil rig once stood, we caught pictures of an operational oil well. And while the company isn't confirming or denying what is going on at the well, it signals that oil has been discovered in Sanpete County.

Major oil companies did seismic studies and even began drilling in Central Utah in the 1970s and early 1980s but never struck oil. The big players in oil exploration later abandoned the Mountain West. But a small, independent company bought Chevron's research and leases in 1999, and it appears to have paid off.



Wolverine Gas and Oil hit oil at the field in nearby Sevier County in late 2003. It appears Wolverine has unlocked the secret to where the oil is and, more importantly, how to recover it.

Other independent oil companies are taking notice too. There has been a frenzy of companies going after mineral rights or buying land in the area in recent months. Plans to drill at least two other wells in Sanpete County are said to be in the immediate future.

Some industry insiders call the Central Utah find the biggest discovery in the Rocky Mountains in 30 years and believe it could yield billions of barrels of oil. Community leaders of the small county are trying to prepare for what oil could bring.

Sanpete County Commissioner Mark Anderson said, "We have gone to other counties, such as Sevier, Uintah, Duchesne and asked them about the impact they have felt from oil discovery. And we've learned a few things from them. So we think we are ahead of the curve, and we're excited for the discovery, and we think it is a real plus for us."

The Utah Division of Oil, Gas and Mining is monitoring the well, but companies are afforded one year of confidentiality to protect their proprietary information, so we won't officially know what is happening there until next spring. Also, oil discoveries take time to develop, so it could be years before the extent of the discovery is really known.

E-mail: [spenrod@ksl.com](mailto:spenrod@ksl.com)

**STATE OF UTAH**  
DEPARTMENT OF NATURAL RESOURCES  
DIVISION OF OIL, GAS AND MINING

<b>SUNDRY NOTICES AND REPORTS ON WELLS</b>  <small>Do not use this form for proposals to drill new wells, significantly deepen existing wells below current bottom-hole depth, reenter plugged wells, or to drill horizontal laterals. Use APPLICATION FOR PERMIT TO DRILL form for such proposals.</small>			5. LEASE DESIGNATION AND SERIAL NUMBER: <b>UTU-80907</b>	
			6. IF INDIAN, ALLOTTEE OR TRIBE NAME: <b>NA</b>	
			7. UNIT or CA AGREEMENT NAME: <b>Wolverine Federal Unit</b>	
			8. WELL NAME and NUMBER: <b>Wolv. Fed. Arapien Valley 24-1</b>	
1. TYPE OF WELL OIL WELL <input checked="" type="checkbox"/> GAS WELL <input type="checkbox"/> OTHER _____			9. API NUMBER: <b>4303930030</b>	
2. NAME OF OPERATOR: <b>Wolverine Gas and Oil Company of Utah, LLC</b>			10. FIELD AND POOL, OR WILDCAT: <b>Wildcat</b>	
3. ADDRESS OF OPERATOR: <b>55 Campau NW</b> CITY <b>Grand Rapids</b> STATE <b>MI</b> ZIP <b>49503-2616</b>			PHONE NUMBER: <b>(616) 458-1150</b>	
4. LOCATION OF WELL FOOTAGES AT SURFACE: <b>2331' FNL, 549' FWL</b> COUNTY: <b>Sanpete</b>  QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN: <b>SWNW 24 20S 1E S</b> STATE: <b>UTAH</b>				

11. CHECK APPROPRIATE BOXES TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA			
TYPE OF SUBMISSION	TYPE OF ACTION		
<input type="checkbox"/> NOTICE OF INTENT (Submit in Duplicate)  Approximate date work will start: _____	<input type="checkbox"/> ACIDIZE	<input type="checkbox"/> DEEPEN	<input type="checkbox"/> REPERFORATE CURRENT FORMATION
	<input type="checkbox"/> ALTER CASING	<input type="checkbox"/> FRACTURE TREAT	<input type="checkbox"/> SIDETRACK TO REPAIR WELL
<input checked="" type="checkbox"/> SUBSEQUENT REPORT (Submit Original Form Only)  Date of work completion: _____	<input type="checkbox"/> CASING REPAIR	<input type="checkbox"/> NEW CONSTRUCTION	<input type="checkbox"/> TEMPORARILY ABANDON
	<input type="checkbox"/> CHANGE TO PREVIOUS PLANS	<input type="checkbox"/> OPERATOR CHANGE	<input type="checkbox"/> TUBING REPAIR
	<input type="checkbox"/> CHANGE TUBING	<input type="checkbox"/> PLUG AND ABANDON	<input type="checkbox"/> VENT OR FLARE
	<input type="checkbox"/> CHANGE WELL NAME	<input type="checkbox"/> PLUG BACK	<input type="checkbox"/> WATER DISPOSAL
	<input type="checkbox"/> CHANGE WELL STATUS	<input type="checkbox"/> PRODUCTION (START/RESUME)	<input type="checkbox"/> WATER SHUT-OFF
	<input type="checkbox"/> COMMINGLE PRODUCING FORMATIONS	<input type="checkbox"/> RECLAMATION OF WELL SITE	<input checked="" type="checkbox"/> OTHER: <u>Activity Update</u>
	<input type="checkbox"/> CONVERT WELL TYPE	<input type="checkbox"/> RECOMPLETE - DIFFERENT FORMATION	

12. DESCRIBE PROPOSED OR COMPLETED OPERATIONS. Clearly show all pertinent details including dates, depths, volumes, etc.

**CONTINUED CONFIDENTIAL STATUS REQUESTED**

The drilling rig was released on 2/28/2008 and moved off location. Testing and completion activities are now in progress. The Navajo1 perforations at 9104'- 9131' were flow tested with last reported producing rates of 120 BOPD, 216 BWPD, and 810 MCFD at a flowing THP of 240 psi. The well was shut-in and a pressure build-up test was performed. Bottom-hole samples were collected and the well remains shut-in waiting for a production log service to become available. It is planned to temporarily return the well to production, run a production log, and evaluate options for water shut-off.

NAME (PLEASE PRINT) <u>Ellis M. Peterson</u>	TITLE <u>Senior Production Engineer</u>
SIGNATURE 	DATE <u>7/31/2008</u>

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**AUG 06 2008**

UNITED STATES  
DEPARTMENT OF THE INTERIOR  
BUREAU OF LAND MANAGEMENT

CONFIDENTIAL

FORM APPROVED  
OMB No. 1004-0137  
Expires: March 31, 2007

## SUNDRY NOTICES AND REPORTS ON WELLS

*Do not use this form for proposals to drill or to re-enter an abandoned well. Use Form 3160-3 (APD) for such proposals.*

**SUBMIT IN TRIPLICATE- Other instructions on reverse side.**1. Type of Well  
☒ Oil Well ☐ Gas Well ☐ Other2. Name of Operator  
Wolverine Gas and Oil Company of Utah, LLC3a. Address  
55 Campau NW, Grand Rapids, MI 495033b. Phone No. (include area code)  
616-458-1150

4. Location of Well (Footage, Sec., T., R., M., or Survey Description)

2331' FNL, 549' FWL, Sec. 24, T20S, R1E, SLB&amp;M

5. Lease Serial No.  
UTU-809076. If Indian, Allottee or Tribe Name  
NA7. If Unit or CA/Agreement, Name and/or No.  
Wolverine Unit8. Well Name and No.  
Wolverine Federal Arapien Valley 24-19. API Well No.  
43-039-3003010. Field and Pool, or Exploratory Area  
Wildcat11. County or Parish, State  
Sanpete County, Utah

## 12. CHECK APPROPRIATE BOX(ES) TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA

TYPE OF SUBMISSION	TYPE OF ACTION			
<input type="checkbox"/> Notice of Intent	<input type="checkbox"/> Acidize	<input type="checkbox"/> Deepen	<input type="checkbox"/> Production (Start/Resume)	<input type="checkbox"/> Water Shut-Off
<input checked="" type="checkbox"/> Subsequent Report	<input type="checkbox"/> Alter Casing	<input type="checkbox"/> Fracture Treat	<input type="checkbox"/> Reclamation	<input type="checkbox"/> Well Integrity
<input type="checkbox"/> Final Abandonment Notice	<input type="checkbox"/> Casing Repair	<input type="checkbox"/> New Construction	<input type="checkbox"/> Recomplete	<input checked="" type="checkbox"/> Other Activity Update
	<input type="checkbox"/> Change Plans	<input type="checkbox"/> Plug and Abandon	<input type="checkbox"/> Temporarily Abandon	
	<input type="checkbox"/> Convert to Injection	<input type="checkbox"/> Plug Back	<input type="checkbox"/> Water Disposal	

13. Describe Proposed or Completed Operation (clearly state all pertinent details, including estimated starting date of any proposed work and approximate duration thereof. If the proposal is to deepen directionally or recompleat horizontally, give subsurface locations and measured and true vertical depths of all pertinent markers and zones. Attach the Bond under which the work will be performed or provide the Bond No. on file with BLM/BIA. Required subsequent reports shall be filed within 30 days following completion of the involved operations. If the operation results in a multiple completion or recompleat in a new interval, a Form 3160-4 shall be filed once testing has been completed. Final Abandonment Notices shall be filed only after all requirements, including reclamation, have been completed, and the operator has determined that the site is ready for final inspection.)

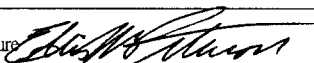
Please see the attached compilation of daily reports as an update of testing and completion activities at the Arapien Valley 24-1 exploratory well. This well is currently shut in and activities on the well are suspended for a few weeks while waiting for a completion rig. When activities resume, it is planned to cement squeeze the existing Navajo1 perforations at 9104' - 9166' using 100 sacks of premium cement. Another Navajo1 interval at 8942' - 8948' will then be perforated and flow tested as detailed in the attached procedure.

14. I hereby certify that the foregoing is true and correct  
Name (Printed/Typed)

Ellis Peterson

Title Sr. Production Engineer

Signature



Date

08/20/2008

## THIS SPACE FOR FEDERAL OR STATE OFFICE USE

Approved by

Conditions of approval, if any, are attached. Approval of this notice does not warrant or certify that the applicant holds legal or equitable title to those rights in the subject lease which would entitle the applicant to conduct operations thereon.

Title

Date

Office

Title 18 U.S.C. Section 1001 and Title 43 U.S.C. Section 1212, make it a crime for any person knowingly and willfully to make to any department or agency of the United States any false, fictitious or fraudulent statements or representations as to any matter within its jurisdiction.

(Instructions on page 2)

RECEIVED  
AUG 26 2008  
DIV. OF OIL, GAS & MINING





# Wolverine Gas And Oil Company of Utah LLC

*Energy Exploration in Partnership with the Environment*

Providence Field      Federal AV 24-1      SW/NW Section 24, T20S, R1E      API # 43-039-30030      Sanpete Co, Utah

<u>8/12/2008</u>	Well production 151 bopd, 232 bwpd, 735 MCFPD
<u>8/13/2008</u>	Well production 120 bopd, 217 bwpd, 740 MCFPD
<u>8/14/2008</u>	Well production 128 bopd, 217 bwpd, 740 MCFPD
<u>8/15/2008</u>	Well production 63 bo, 118 bw, 735 MCF in 14 hrs. Shut well in at 2:00 PM. Well will remain SI until completion rig moves back on for further evaluations.
<u>8/16/2008</u>	No activity
<u>8/17/2008</u>	No activity
<u>8/18/2008</u>	No activity
<u>8/19/2008</u>	No activity

Supervisor: *Tony E. Cook*

## Tight Hole

### **Wolverine Gas & Oil Company of Utah, LLC Completion Procedure**

#### **Arapien Valley 24-1 Providence Field**

Purpose: Plug back existing Navajo1 perforations and then complete and test additional Navajo1 interval.

#### PERTINENT INFORMATION

Location: 2331' FNL, 549' FWL (SW-NW)  
Section 24, Township 20 South, Range 1 East  
Sanpete County, Utah

Elevation: 5554' GL, 5580' KB

TD: 13,050'

PBTD: 9188' (cement on top of CICR @ 9205')

API No.: 43-039-30030

Casing: 13-3/8", 68.0# @ 2017', cemented to surface  
9-5/8", 47.0# HCL-80 and 53# HCP-110, LT&C @ 10,373', foam cemented with  
returns to surface  
5-1/2", 20.0#, P-110, LT&C @ 12,755', stage tool at 9950', cemented with 735 sks  
50:50 Poz (Stage 1) and 1635 sks of Class G (Stage 2)

Wellhead: Tubing Head Flange – 7-1/16" 10k w/ 2-7/8" EUE top connection

Tubing: 2-7/8", 6.5#, L-80, EUE, 8rd (new)

Production Casing Specs: 5-1/2", 20.0#, P-110, LT&C, 8rd, ID: 4.778" Drift: 4.653"  
Collapse: 11,080 psi Burst: 12,640 psi (80% 10,112 psi)

Tubing Specs: 2-7/8", 6.5#, L-80, EUE, 8rd, ID: 2.441" Drift: 2.347"  
Collapse: 11,170 psi Burst: 10,570 psi (80% 8456 psi)  
Joint: 145,000 lbs (80% 116,000 lbs)

Capacities: 5-1/2", 20.0#: 0.0221 Bbls/ft, 0.1245 ft<sup>3</sup>/ft  
2-7/8", 6.5#: 0.00579 Bbls/ft, 0.0325 ft<sup>3</sup>/ft  
5-1/2" x 2-7/8" Annulus: 0.0141 Bbls/ft, 0.0794 ft<sup>3</sup>/ft

BH Temperature: 200°F @ 9000'

#### Existing Navajo2 Perforations:

12,373'- 12,380' MD (12,370'- 12,377' TVD), 7', 42 holes (below CIBP @ 12,369')  
12,290'- 12,316' MD (12,287'- 12,313' TVD), 26', 156 holes (below CIBP @ 12,280')

All depths are referenced to Schlumberger Platform Express CN-TDL-GR log dated 2/21/2008.

**Existing Navajo1 Perforations:**

9217'- 9222' MD (9216'- 9221' TVD), 5', 30 holes (below CICR @ 9205')  
9160'- 9166' MD (9159'- 9165' TVD), 6', 36 holes  
9145'- 9154' MD (9144'- 9153' TVD), 9', 54 holes  
9104'- 9131' MD (9103'- 9130' TVD), 27', 162 holes

**Proposed Navajo1 Perforations:**

8942'- 8948' MD (8941'- 8947' TVD), 6', 36 holes

All depths are referenced to Schlumberger Platform Express CN-TDL-GR log dated 1/17/2008.  
CBL dated 4/12/2008 is 2' shallow to open-hole logs at Navajo1 depth.

Note: Poisonous Hydrogen Sulfide (H<sub>2</sub>S) gas is present in the Navajo1 Formation so appropriate safety procedures should be followed.

**PROCEDURE**

1. Fill a 500-Bbl frac tank with completion fluid (CF) consisting of filtered 4% KCl water, 21 gallons (1000 ppm) Baker Petrolite WAW 3003 non-ionic surfactant, 5.25 gallons (250 ppm) XC102W biocide, and 1.25 gallons (60 ppm) OSW5200 Oxygen Scavenger.
2. MIRU completion unit. Kill well with completion fluid. ND wellhead and NU BOP.
3. Release Arrowset-1 packer set at 9048' and circulate 230+ Bbls. POOH with tubing and packer assembly.
4. RIH with a CICR on tubing and set it at 9090''. RU cementing company to squeeze perforations at 9104' - 9166' using 100 sacks of premium cement containing additives per selected service company recommendation to allow 4 hours of pump time with the BHP of 200 °F. Hesitation squeeze to a maximum pressure of 3000 psi then pull up to leave at least 0.5 Bbls of cement on top of CICR. Pull up to 9080' and reverse circulate tubing clean.
5. POOH to 4000'. RU and swab fluid level in well down to 2500'. RD swab and finish POOH with tubing and stinger.
6. RU wireline with lubricator and perforate at 8942' - 8948' (8938' - 8944' on 4/12/2008 CBL depths) with 0.40+'' diameter holes using 4'' hollow expendable carriers loaded 6 SPF on 60° phasing with 25 gram charges. RD and release wireline service.
7. Fill hole with completion fluid. RIH with a wireline re-entry guide, one joint of 2-3/8'' tubing, 2-3/8'' x 1.870'' XN profile landing nipple, 6' 2-3/8'' tubing sub, 5.5'' x 2-7/8'' nickel coated Arrowset 1-X retrievable packer, one joint of 2-7/8'' tubing, 2-7/8''x 2.25'' seating nipple, and 2-7/8'' tubing to surface. Space out, set packer at 8870', and land tubing in hanger with 20,000 lbs compression.
8. Pressure test 2-7/8'' x 5-1/2'' annulus to 2500 psi using rig pump. ND BOP and NU wellhead (include a swab valve).
9. RU to break down and ball off the isolated perforation interval using 1000 gallons of 4% KCl completion fluid mixed with 5 gallons of Halliburton GasPerm 1000 and 70 mixed ball sealers (half BioBalls and half buoyant balls). Hold safety meeting and pump treatment as follows, then RD and release Halliburton.

Fluids and Additives:

Breakdown Fluid: 1000 gallons completion fluid with an added 4 gallons of GasPerm 1000.

Diverter: 70 Diverter Balls including 35 BioBalls MR (7/8", green) and 35 7/8" 0.90 S.G. balls.

Corrosion Inhibitor: 15 gallons of Baker Petrolite CRO195 mixed in 2 Bbls of CF

Displacement Fluid: 58 Barrels CF

Maximum Injection Pressure: 5000 psi

Injection Rate: 2-4 BPM

Pump Schedule:

- A. Pressure test surface lines to 5500+ psi.
  - B. Pressure up and trap ~2000 psi on casing.
  - C. Pump 300 gallons (7.1 Bbls) of Breakdown Fluid (with no balls) at a rate of rate of 2-4 BPM and 3000 - 5000 psi.
  - D. Pump 350 gallons (8.3 Bbls) of Breakdown Fluid containing 35 buoyant balls (one per 10 gallons) at a rate of a rate of rate of 2-4 BPM and 3000 - 5000 psi.
  - E. Pump 350 gallons (8.3 Bbls) of Breakdown Fluid containing 35 BioBalls (one per 10 gallons) at a rate of a rate of rate of 2-4 BPM and 3000 - 5000 psi.
  - F. Pump 2 Bbls of corrosion inhibitor fluid.
  - G. Pump 2436 gallons (58 Bbls) of displacement fluid to displace Breakdown Fluid and balls at a rate of 2-4 BPM and 3000 - 5000 psi.
  - H. Shut well in and record ISIP.
- 10. RU and swab well in.
  - 11. Swab to initiate flow and turn flowing well to temporary production. RDMOSU.
  - 12. After load fluid is recovered, adjust choke to establish a stabilized flow rate with a minimum FTP of 200 psi. Record production and flowing conditions on a daily basis.

Note: Duration of production period will be just long enough to establish and meter stabilized flow, collect production samples, and possibly conduct a pressure build-up test.

**STATE OF UTAH**  
DEPARTMENT OF NATURAL RESOURCES  
DIVISION OF OIL, GAS AND MINING

FORM 9

**SUNDRY NOTICES AND REPORTS ON WELLS**

Do not use this form for proposals to drill new wells, significantly deepen existing wells below current bottom-hole depth, reenter plugged wells, or to drill horizontal laterals. Use APPLICATION FOR PERMIT TO DRILL form for such proposals.

1. TYPE OF WELL OIL WELL <input checked="" type="checkbox"/> GAS WELL <input type="checkbox"/> OTHER _____		5. LEASE DESIGNATION AND SERIAL NUMBER: UTU-80907
2. NAME OF OPERATOR: Wolverine Gas and Oil Company of Utah, LLC		6. IF INDIAN, ALLOTTEE OR TRIBE NAME: NA
3. ADDRESS OF OPERATOR: 55 Campau NW CITY Grand Rapids STATE MI ZIP 49503-2616		7. UNIT or CA AGREEMENT NAME: Wolverine Federal Unit
PHONE NUMBER: (616) 458-1150		8. WELL NAME and NUMBER: Wolv. Fed. Arapien Valley 24-1
4. LOCATION OF WELL FOOTAGES AT SURFACE: 2331' FNL, 549' FWL		9. API NUMBER: 4303930030
QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN: SWNW 24 20S 1E S		10. FIELD AND POOL, OR WILDCAT: Wildcat

COUNTY: Sanpete

STATE: UTAH

## 11. CHECK APPROPRIATE BOXES TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA

TYPE OF SUBMISSION	TYPE OF ACTION		
<input type="checkbox"/> NOTICE OF INTENT (Submit in Duplicate) Approximate date work will start: _____	<input type="checkbox"/> ACIDIZE	<input type="checkbox"/> DEEPEN	<input type="checkbox"/> REPERFORATE CURRENT FORMATION
	<input type="checkbox"/> ALTER CASING	<input type="checkbox"/> FRACTURE TREAT	<input type="checkbox"/> SIDETRACK TO REPAIR WELL
	<input type="checkbox"/> CASING REPAIR	<input type="checkbox"/> NEW CONSTRUCTION	<input type="checkbox"/> TEMPORARILY ABANDON
	<input type="checkbox"/> CHANGE TO PREVIOUS PLANS	<input type="checkbox"/> OPERATOR CHANGE	<input type="checkbox"/> TUBING REPAIR
	<input type="checkbox"/> CHANGE TUBING	<input type="checkbox"/> PLUG AND ABANDON	<input type="checkbox"/> VENT OR FLARE
<input checked="" type="checkbox"/> SUBSEQUENT REPORT (Submit Original Form Only) Date of work completion: _____	<input type="checkbox"/> CHANGE WELL NAME	<input type="checkbox"/> PLUG BACK	<input type="checkbox"/> WATER DISPOSAL
	<input type="checkbox"/> CHANGE WELL STATUS	<input type="checkbox"/> PRODUCTION (START/RESUME)	<input type="checkbox"/> WATER SHUT-OFF
	<input type="checkbox"/> COMMINGLE PRODUCING FORMATIONS	<input type="checkbox"/> RECLAMATION OF WELL SITE	<input checked="" type="checkbox"/> OTHER: Activity Update
	<input type="checkbox"/> CONVERT WELL TYPE	<input type="checkbox"/> RECOMPLETE - DIFFERENT FORMATION	

12. DESCRIBE PROPOSED OR COMPLETED OPERATIONS. Clearly show all pertinent details including dates, depths, volumes, etc.

**CONTINUED CONFIDENTIAL STATUS REQUESTED**

The drilling rig was released on 2/28/2008 and moved off location. Testing and completion activities are now in progress. The Navajo1 perforations at 9104'- 9166' were flow tested for 11 days with last reported producing rates of 128 BOPD, 217 BWPD, and 740 MCFD at a flowing THP of 330 psi. After production rates were stable a production log was run to determine the source of water production which was verified as being the bottom most perforations. The well is now shut-in awaiting for completion services to cement the currently active perforations and then perforate and flow test another Navajo interval.

NAME (PLEASE PRINT) <u>Ellis M. Peterson</u>	TITLE <u>Senior Production Engineer</u>
SIGNATURE 	DATE <u>8/29/2008</u>

(This space for State use only)

**RECEIVED****SEP 08 2008****DIV. OF OIL, GAS & MINING**



**WOLVERINE GAS AND OIL COMPANY  
OF UTAH, LLC**

*Energy Exploration in Partnership with the Environment*

September 11, 2008

Mr. Stan Andersen  
Fluid Minerals Group  
Bureau of Land Management  
Richfield Field Office  
150 East 900 North  
Richfield, Utah 84701

Re: Sundry Notice - Wolverine Gas and Oil Company of Utah, LLC  
**Wolverine Federal Arapien Valley 24-1**

Dear Mr. Andersen:

Wolverine Gas and Oil Company of Utah, LLC respectfully submits the enclosed Sundry Notice (Form 3160-5) for the subject well. The Sundry Notice is to request continuation of flaring/venting as needed for extended testing operations.

Please accept this letter as Wolverine's written request for continued confidential treatment of all information relating to this well.

Sincerely,

Ellis M. Peterson  
Senior Production Engineer  
Wolverine Gas and Oil

cc. Gil Hunt, UDOGM

**RECEIVED**

**SEP 15 2008**

**DIV. OF OIL, GAS & MINING**

UNITED STATES  
DEPARTMENT OF THE INTERIOR  
BUREAU OF LAND MANAGEMENT

CONFIDENTIAL

FORM APPROVED  
OMB No. 1004-0137  
Expires: March 31, 2007

## SUNDRY NOTICES AND REPORTS ON WELLS

**Do not use this form for proposals to drill or to re-enter an abandoned well. Use Form 3160-3 (APD) for such proposals.**

**SUBMIT IN TRIPLICATE- Other instructions on reverse side.**1. Type of Well  
☒ Oil Well ☐ Gas Well ☐ Other2. Name of Operator **Wolverine Gas and Oil Company of Utah, LLC**3a. Address  
**55 Campau NW, Grand Rapids, MI 49503**3b. Phone No. (include area code)  
**616-458-1150**4. Location of Well (Footage, Sec., T., R., M., or Survey Description)  
**2331' FNL, 549' FWL, Sec. 24, T20S, R1E, SLB&M**

5. Lease Serial No.

**UTU-80907**

6. If Indian, Allottee or Tribe Name

**NA**

7. If Unit or CA/Agreement, Name and/or No.

**Wolverine Unit**

8. Well Name and No.

**Wolverine Federal Arapien Valley 24-1**

9. API Well No.

**43-039-30030**

10. Field and Pool, or Exploratory Area

**Wildcat**

11. County or Parish, State

**Sanpete County, Utah**

## 12. CHECK APPROPRIATE BOX(ES) TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA

TYPE OF SUBMISSION	TYPE OF ACTION			
<input checked="" type="checkbox"/> Notice of Intent	<input type="checkbox"/> Acidize	<input type="checkbox"/> Deepen	<input type="checkbox"/> Production (Start/Resume)	<input type="checkbox"/> Water Shut-Off
<input type="checkbox"/> Subsequent Report	<input type="checkbox"/> Alter Casing	<input type="checkbox"/> Fracture Treat	<input type="checkbox"/> Reclamation	<input type="checkbox"/> Well Integrity
<input type="checkbox"/> Final Abandonment Notice	<input type="checkbox"/> Casing Repair	<input type="checkbox"/> New Construction	<input type="checkbox"/> Recomplete	<input checked="" type="checkbox"/> Other <b>Continued testing</b>
	<input type="checkbox"/> Change Plans	<input type="checkbox"/> Plug and Abandon	<input type="checkbox"/> Temporarily Abandon	<b>with gas venting</b>
	<input type="checkbox"/> Convert to Injection	<input type="checkbox"/> Plug Back	<input type="checkbox"/> Water Disposal	

13. Describe Proposed or Completed Operation (clearly state all pertinent details, including estimated starting date of any proposed work and approximate duration thereof. If the proposal is to deepen directionally or recompleat horizontally, give subsurface locations and measured and true vertical depths of all pertinent markers and zones. Attach the Bond under which the work will be performed or provide the Bond No. on file with BLM/BIA. Required subsequent reports shall be filed within 30 days following completion of the involved operations. If the operation results in a multiple completion or recompleat in a new interval, a Form 3160-4 shall be filed once testing has been completed. Final Abandonment Notices shall be filed only after all requirements, including reclamation, have been completed, and the operator has determined that the site is ready for final inspection.)

This is the discovery well for a new field with multiple potential oil accumulations. Extensive testing has been completed in several intervals of interest in Navajo1 and Navajo2 reservoirs during which a total of approximately 22 MMCF of gas have been vented/flared. There are two potentially productive but untested intervals remaining that require testing to confirm productivity and reservoir content, but an extension of the 30-day limit allowed by NTL-4a for flaring/venting of gas is necessary in order to complete this testing. A continuation of the initial flaring/venting period for testing this well for up to 20 additional days is therefore requested so testing operations of intervals at depths of 8942'-8948' and 8854'-8872' can be completed.

A wellbore schematic showing the current mechanical configuration and test results to date is included herewith.

COPY SENT TO OPERATOR

Date: 9.23.2008Initials: KSAccepted by the  
Utah Division of  
Oil, Gas and MiningDate: 9/17/08By: [Signature]2649-3-19(1)Federal Approval Of This  
Action Is Necessary

14. I hereby certify that the foregoing is true and correct.
- 
- Name (Printed/Typed)

**Ellis Peterson**Title **Sr. Production Engineer**Signature [Signature]

Date

**09/11/2008**

## THIS SPACE FOR FEDERAL OR STATE OFFICE USE

Approved by	Title	Date
Conditions of approval, if any, are attached. Approval of this notice does not warrant or certify that the applicant holds legal or equitable title to those rights in the subject lease which would entitle the applicant to conduct operations thereon.	Office	

Title 18 U.S.C. Section 1001 and Title 43 U.S.C. Section 1212, make it a crime for any person knowingly and willfully to make to any department or agency of the United States any false, fictitious or fraudulent statements or representations as to any matter within its jurisdiction.

(Instructions on page 2)

RECEIVED

SEP 15 2008

DIV. OF OIL, GAS &amp; MINING

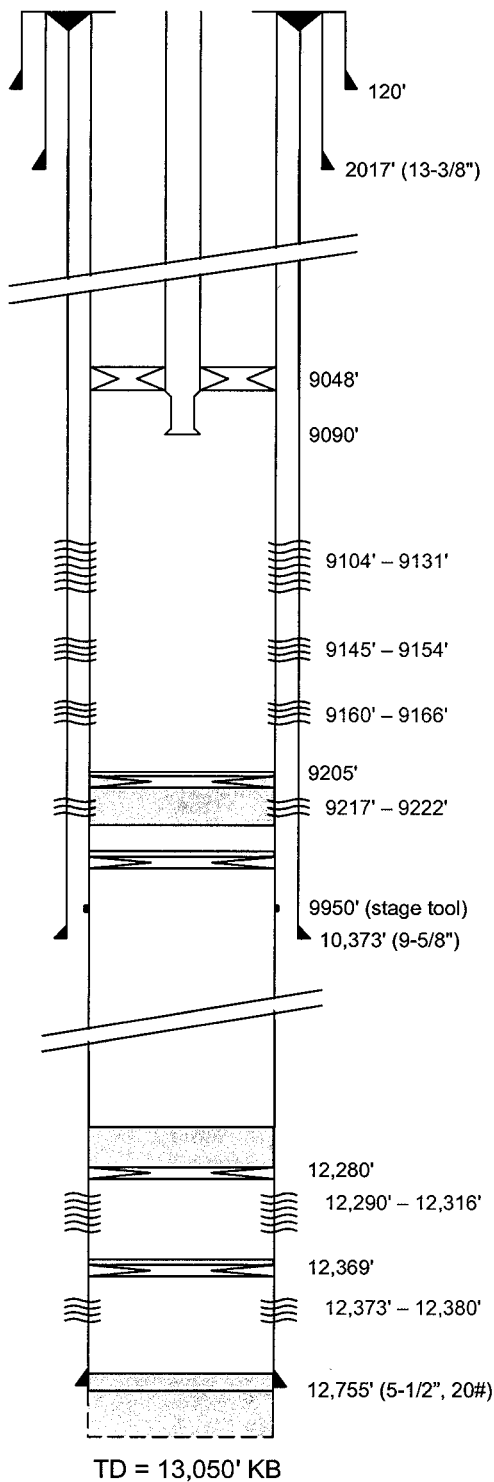


**Arapien Valley 24-1  
Providence Field  
API # 43-039-30030  
Sanpete County, Utah**

**(Not to Scale)**

Ground Elevation: 5,554'

KB Elevation: 5,580'



**Vertical Well**

Surface: 2331' FNL 549' FWL, SW NW, 24-20S-1E

Total Depth: 2370' FNL 620' FWL, SW NW, 24-20S-1E

**9104' – 9166':** Recovery: 2215 BO, 2910 BW, 9.7 MMCF  
Flashed Gas – 1.47 sp. gr., 30 ppm H<sub>2</sub>S, 79% CO<sub>2</sub>, 6% N<sub>2</sub>,  
349 BTU/scf  
Flashed Oil – 48 °API, 2380 scf/stb  
Final Rate: 128 BOPD, 217 BWPD, 740 MCFD w/ 330 psi FTP

**9104' – 9131':** Recovery: 964 BO, 941 BW, 6.3 MMCF  
Final Rate: 163 BOPD, 160 BWPD, 1183 MCFD w/ 380 psi FTP

**9145' – 9166':** Recovery: 550 BO, 129 BW, 1.5 MMCF  
Final Rate: 150 BOPD, 72 BWPD, 713 MCFD w/ 420 psi FTP

**9217' – 9222':** Swabbed and flowed 20 hours (recovered 22 BO,  
405 BW, gas not measured)

**12,290' – 12,316':** Recovery: 1338 BO, 122 BW, 4 MMCF  
Flashed Gas – 1.02 sp. gr., 0.08% H<sub>2</sub>S, 7% CO<sub>2</sub>, 9% N<sub>2</sub>,  
1437 BTU/scf  
Flashed Oil – 48 °API, 2380 scf/stb  
Final Rate: 160 BOPD, 20 BWPD, 473 MCFD w/ 200 psi FTP

**12,373' – 12,380':** Flowed oil and gas (no water) for 21 hours  
before equipment failure.





**WOLVERINE GAS AND OIL COMPANY  
OF UTAH, LLC**

*Energy Exploration in Partnership with the Environment*

September 17, 2008

Mr. Stan Andersen  
Fluid Minerals Group  
Bureau of Land Management  
Richfield Field Office  
150 East 900 North  
Richfield, Utah 84701

RECEIVED  
SEP 23 2008  
DIV. OF OIL, GAS & MINING

43 039 30030

Re: Sundry Notice - Wolverine Gas and Oil Company of Utah, LLC  
Wolverine Federal Arapien Valley 24-1

20S 1E 24

Dear Mr. Andersen:

Wolverine Gas and Oil Company of Utah, LLC respectfully submits the enclosed Sundry Notice (Form 3160-5) for the subject well. The Sundry Notice is to give notice of intent and request approval to continue testing activities on the well per the attached procedure.

Please accept this letter as Wolverine's written request for continued confidential treatment of all information relating to this well.

Sincerely,

Ellis M. Peterson  
Senior Production Engineer  
Wolverine Gas and Oil

xc: Gil Hunt, UDOGM

CONFIDENTIAL

Form 3160-5  
(April 2004)UNITED STATES  
DEPARTMENT OF THE INTERIOR  
BUREAU OF LAND MANAGEMENTFORM APPROVED  
OMB No. 1004-0137  
Expires: March 31, 2007**SUNDRY NOTICES AND REPORTS ON WELLS***Do not use this form for proposals to drill or to re-enter an abandoned well. Use Form 3160-3 (APD) for such proposals.***SUBMIT IN TRIPLICATE- Other instructions on reverse side.**

1. Type of Well <input checked="" type="checkbox"/> Oil Well <input type="checkbox"/> Gas Well <input type="checkbox"/> Other		5. Lease Serial No. <b>UTU-80907</b>
2. Name of Operator <b>Wolverine Gas and Oil Company of Utah, LLC</b>		6. If Indian, Allottee or Tribe Name <b>NA</b>
3a. Address <b>55 Campau NW, Grand Rapids, MI 49503</b>	3b. Phone No. (include area code) <b>616-458-1150</b>	7. If Unit or CA/Agreement, Name and/or No. <b>Wolverine Unit</b>
4. Location of Well (Footage, Sec., T., R., M., or Survey Description) <b>2331' FNL, 549' FWL, Sec. 24, T20S, R1E, SLB&amp;M</b>		8. Well Name and No. <b>Wolverine Federal Arapien Valley 24-1</b>
		9. API Well No. <b>43-039-30030</b>
		10. Field and Pool, or Exploratory Area <b>Wildcat</b>
		11. County or Parish, State <b>Sanpete County, Utah</b>

**12. CHECK APPROPRIATE BOX(ES) TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA**

TYPE OF SUBMISSION	TYPE OF ACTION			
<input checked="" type="checkbox"/> Notice of Intent	<input type="checkbox"/> Acidize	<input type="checkbox"/> Deepen	<input type="checkbox"/> Production (Start/Resume)	<input type="checkbox"/> Water Shut-Off
<input type="checkbox"/> Subsequent Report	<input checked="" type="checkbox"/> Alter Casing	<input type="checkbox"/> Fracture Treat	<input type="checkbox"/> Reclamation	<input type="checkbox"/> Well Integrity
<input type="checkbox"/> Final Abandonment Notice	<input type="checkbox"/> Casing Repair	<input type="checkbox"/> New Construction	<input type="checkbox"/> Recomplete	<input type="checkbox"/> Other
	<input type="checkbox"/> Change Plans	<input type="checkbox"/> Plug and Abandon	<input type="checkbox"/> Temporarily Abandon	
	<input type="checkbox"/> Convert to Injection	<input checked="" type="checkbox"/> Plug Back	<input type="checkbox"/> Water Disposal	

13. Describe Proposed or Completed Operation (clearly state all pertinent details, including estimated starting date of any proposed work and approximate duration thereof. If the proposal is to deepen directionally or recompleat horizontally, give subsurface locations and measured and true vertical depths of all pertinent markers and zones. Attach the Bond under which the work will be performed or provide the Bond No. on file with BLM/BIA. Required subsequent reports shall be filed within 30 days following completion of the involved operations. If the operation results in a multiple completion or recompleat in a new interval, a Form 3160-4 shall be filed once testing has been completed. Final Abandonment Notices shall be filed only after all requirements, including reclamation, have been completed, and the operator has determined that the site is ready for final inspection.)

This is the discovery well for a new field with multiple potential oil accumulations. It is planned to continue testing select intervals to determine the reservoir fluid content and production potential of the Navajo1 Formation. By previous Sundry Notice, continuation of the initial flaring/venting period for an additional 20 days was requested to allow the testing of the proposed intervals. This Sundry Notice requests approval and gives intent to cement squeeze perforations at 9104' - 9166'; perforate, test, and cement squeeze an interval at 8942' - 8948'; and perforate and test select intervals at 8854' - 8922'. A procedure outlining details of these plans is attached. This Sundry Notice is intended to supersede previous requests to complete intervals in the Upper Navajo1. The requested continuation of testing activities is expected to commence on approximately September 29, 2008 provided that necessary regulatory approvals are received and completion services are available.

**COPY SENT TO OPERATOR**Date: 10.7.2008Initials: KS

14. I hereby certify that the foregoing is true and correct  
Name (Printed/Typed)

Ellis Peterson

Title Sr. Production Engineer

Signature



Date

09/16/2008

**THIS SPACE FOR FEDERAL OR STATE OFFICE USE**

Approved by

Conditions of approval, if any, are attached. Approval of this notice does not warrant or certify that the applicant holds legal or equitable title to those rights in the subject lease which would entitle the applicant to conduct operations thereon.

Accepted by the  
Utah Division of  
Oil, Gas and Mining  
Office

Date

Federal Approval Of This  
Action Is Necessary

Title 18 U.S.C. Section 1001 and Title 43 U.S.C. Section 1212, make it a crime for any person knowingly and willfully to make to any department or agency of the United States any false, fictitious or fraudulent statements or representations as to any matter within its jurisdiction.

(Instructions on page 2)

By: **RECEIVED**

SEP 23 2008

DIV. OF OIL, GAS &amp; MINING

## Tight Hole

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### **Wolverine Gas & Oil Company of Utah, LLC Completion Procedure**

#### **Arapien Valley 24-1 Providence Field**

Purpose: Plug back existing Navajo1 perforations and then complete and test additional Navajo1 intervals.

#### PERTINENT INFORMATION

Location: 2331' FNL, 549' FWL (SW-NW)  
Section 24, Township 20 South, Range 1 East  
Sanpete County, Utah

Elevation: 5554' GL, 5580' KB

TD: 13,050'

PBTD: 9188' (cement on top of CICR @ 9205')

API No.: 43-039-30030

Casing: 13-3/8", 68.0# @ 2017', cemented to surface  
9-5/8", 47.0# HCL-80 and 53# HCP-110, LT&C @ 10,373', foam cemented with  
returns to surface  
5-1/2", 20.0#, P-110, LT&C @ 12,755', stage tool at 9950', cemented with 735 sks  
50:50 Poz (Stage 1) and 1635 sks of Class G (Stage 2)

Wellhead: Tubing Head Flange – 7-1/16" 10k w/ 2-7/8" EUE top connection

Tubing: 2-7/8", 6.5#, L-80, EUE, 8rd (new)

Production Casing Specs: 5-1/2", 20.0#, P-110, LT&C, 8rd, ID: 4.778" Drift: 4.653"  
Collapse: 11,080 psi Burst: 12,640 psi (80% 10,112 psi)

Tubing Specs: 2-7/8", 6.5#, L-80, EUE, 8rd, ID: 2.441" Drift: 2.347"  
Collapse: 11,170 psi Burst: 10,570 psi (80% 8456 psi)  
Joint: 145,000 lbs (80% 116,000 lbs)

Capacities: 5-1/2", 20.0#: 0.0221 Bbls/ft, 0.1245 ft<sup>3</sup>/ft  
2-7/8", 6.5#: 0.00579 Bbls/ft, 0.0325 ft<sup>3</sup>/ft  
5-1/2" x 2-7/8" Annulus: 0.0141 Bbls/ft, 0.0794 ft<sup>3</sup>/ft

BH Temperature: 200°F @ 9000'

#### Existing Navajo2 Perforations:

12,373'- 12,380' MD (12,370'- 12,377' TVD), 7', 42 holes (below CIBP @ 12,369')  
12,290'- 12,316' MD (12,287'- 12,313' TVD), 26', 156 holes (below CIBP @ 12,280')

All depths are referenced to Schlumberger Platform Express CN-TDL-GR log dated 2/21/2008.

**Existing Navajo1 Perforations:**

9217'- 9222' MD (9216'- 9221' TVD), 5', 30 holes (below CICR @ 9205')  
9160'- 9166' MD (9159'- 9165' TVD), 6', 36 holes  
9145'- 9154' MD (9144'- 9153' TVD), 9', 54 holes  
9104'- 9131' MD (9103'- 9130' TVD), 27', 162 holes

**Proposed Navajo1 Perforations:**

8942'- 8948' MD (8941'- 8947' TVD), 6', 18 holes  
8920'- 8922' MD (8919'- 8921' TVD), 2', 6 holes  
8904'- 8914' MD (8903'- 8913' TVD), 10', 30 holes  
8881'- 8883' MD (8880'- 8882' TVD), 2', 6 holes  
8865'- 8871' MD (8864'- 8870' TVD), 6', 18 holes  
8854'- 8860' MD (8853'- 8859' TVD), 6', 18 holes

**All depths are referenced to Schlumberger Platform Express CN-TDL-GR log dated 1/17/2008. CBL dated 4/12/2008 is 2' shallow to open-hole logs at Navajo1 depth.**

Note: Poisonous Hydrogen Sulfide (H<sub>2</sub>S) gas is present in the Navajo1 Formation so appropriate safety procedures should be followed.

**PROCEDURE**

1. Fill a 500-Bbl frac tank with completion fluid (CF) consisting of filtered 4% KCl water, 21 gallons (1000 ppm) Baker Petrolite WAW 3003 non-ionic surfactant, 5.25 gallons (250 ppm) XC102W biocide, and 1.25 gallons (60 ppm) OSW5200 Oxygen Scavenger.
2. MIRU completion unit. Kill well with completion fluid. ND wellhead and NU BOP.
3. Release Arrowset-1 packer set at 9048' and circulate 230+ Bbls. POOH with tubing and packer assembly.
4. RIH with a CICR on tubing and set it at 9090'. Pressure test tubing to 2000 psi, shear out and unsting, and then sting back into CICR.
5. RU cementing company to squeeze perforations at 9104' - 9166' using 100 sacks of Class 'G' cement containing additives per selected service company recommendation to allow 4 hours of pump time with the BHP of 200 °F. Pressure test surface lines to 2500 psi. Sting into CICR and establish a rate with fresh water into isolated perforations. Unsting from CICR, mix and pump cement, and displace to within two Bbls of EOT with fresh water. Sting into CICR, hesitation squeeze cement to a maximum pressure of 2000 psi, unsting from CICR to leave at least 0.5 Bbls of cement on top of CICR. Pull up to 9080' and reverse circulate tubing clean. POOH with tubing and stinger.
6. Make up tubing conveyed perforating (TCP) assembly to perforate at 8942' – 8948' with 0.50+” diameter holes using 4” hollow carriers loaded 3 SPF on 120° phasing with 38.5 gram charges using drop-bar detonator. The BH assembly will consist of the TCP guns with mechanical firing head, 2-3/8” tubing sub, one joint 2-3/8” tubing, 2-3/8” perforated fill sub, 2-3/8” x 2-7/8” cross-over, 4 joints of 2-7/8” tubing, 2-7/8” surge tool (glass disk), 7 joints of 2-7/8” tubing, 5-1/2” (20#) x 2-7/8” nickel coated

- Arrowset 1-X packer (w/ 4.625" OD and CO2 compatible elements), one joint of 2-7/8" tubing, 2-7/8" x 2.25" seating nipple, and 2-7/8" tubing to surface.
7. RIH with TCP assembly and load tubing with 15 gallons of Baker Petrolite CRO195 (corrosion inhibitor) followed by 22 Bbls of completion fluid to fill up to ~4900'. Set packer at approximate depth to perforate 8942' – 8948'.
  8. RU wireline and run a GR-CCL to correlate and get on depth to Schlumberger Platform Express logs dated 1/17/2008. Move and reset packer as needed to get perforation guns on depth, and re-run correlation to verify that guns are situated to perforate 8942' – 8948'. RD wireline.
  9. Space out and land tubing in 20,000+ lbs compression. Secure all flow lines and connect to production equipment for flow testing with gas flaring/venting. Pressure 2-7/8" x 5-1/2" annulus to 1000 psi and trap pressure. Drop bar to break glass disk and perforate the well at 8942' – 8948'.
  10. Observe pressure response with the choke closed and then slowly open choke to allow flow through production equipment. Adjust choke and flow as needed to recover all completion fluid and allow production rate to stabilize with a flowing tubing pressure of 200 – 300 psi.
  11. If well flows as expected, produce the well until a stabilized rate is established but for no more than 3 days. If well will not flow, RU and swab to establish rate and reservoir fluid. If there is insufficient production to establish reservoir fluid, subsequent instructions to retrieve TCP assembly and then perform a ball-out break down with completion fluid will be provided.
  12. Kill well, release packer, and POOH with TCP assembly.
  13. RU wireline and set a 5-1/2" (20#) CICR at 8936' WLM. RD wireline.
  14. RIH with a CICR stinger on 2-7/8" tubing. Circulate hole full and sting into cement retainer. Pressure test casing to 2000 psi. Unsting from CICR if not immediately ready to pump cement.
  15. RU cementing company to squeeze perforations at 8942' - 8948' with 50 sacks of Class 'G' cement containing additives per selected service company recommendation to allow 4 hours of pump time with the BHP of 200 °F. Pressure test surface lines to 2500 psi. Sting into CICR and establish a rate with fresh water into isolated perforations. Unsting from CICR, mix and pump cement, and displace to within two Bbls of EOT with fresh water. Sting into CICR, hesitation squeeze cement to a maximum pressure of 2000 psi, unsting from CICR, pull up 2 feet, and reverse circulate clean.
  16. POOH with tubing and stinger to ~4000'. RU and swab fluid level in casing down to ~2500'. RD swab equipment and finish POOH with tubing.
  17. RU wireline and perforate at 8920' - 8922', and 8904' - 8914' (8916' – 8918' and 8900' – 8910' on 4/12/2008 CBL depths) with 0.50+ inch diameter holes using 4" hollow expendable carriers loaded 3 SPF on 120° phasing with 38.5 gram charges. RD and release wireline unit.
  18. RIH with a 5-1/2" (20#) RBP, retrieving head, one joint of 2-7/8" tubing, a 5-1/2" (20#) stimulation packer, and seating nipple on 2-7/8". Set RBP at 8930' WLM and packer at ~8800'.

19. RU and swab for rate and clean-up until rate, fluid level and water-cut are stable. If needed based on swab results, subsequent instructions will be provided to break-down perforations and ball out.
20. Load tubing with CF, release packer, and lower tubing to RBP. Reverse circulate with 60+ Bbls of completion fluid. Release RBP and reset it at 8898' WLM. Set packer and pressure test RBP to 2000 psi. Release packer and swab fluid level in well down to ~2500'. POOH with packer and tubing.
21. RU wireline and perforate at 8881'- 8883', 8865'- 8871', and 8854'- 8860' (8878'- 8880', 8862'- 8868', and 8851'- 8857' on 4/12/2008 CBL depths) with 0.50+'' diameter holes using 4'' hollow expendable carriers loaded 3 SPF on 120° phasing with 38.5 gram charges. RD and release wireline unit.
22. RIH with a retrieving head, one joint of 2-7/8'' tubing, a 5-1/2'' (20#) stimulation packer, and seating nipple on 2-7/8'' tubing. Set packer at ~8750'.
23. RU and swab for rate and clean-up until rate, fluid level and water-cut are stable. If needed based on swab results, subsequent instructions will be provided to break-down perforations and ball out.
24. Load tubing with CF, release packer, and lower tubing to RBP. Reverse circulate with 60+ Bbls of completion fluid. Release RBP and POOH with tubing and tools.
25. Down-hole equipment to be run next will be as needed to produce the well or to temporarily suspend the well. It will be specified based on the production characteristics of Upper Navaj1 perforation intervals.

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**STATE OF UTAH**  
DEPARTMENT OF NATURAL RESOURCES  
DIVISION OF OIL, GAS AND MINING

FORM 9

**SUNDRY NOTICES AND REPORTS ON WELLS**

Do not use this form for proposals to drill new wells, significantly deepen existing wells below current bottom-hole depth, reenter plugged wells, or to drill horizontal laterals. Use APPLICATION FOR PERMIT TO DRILL form for such proposals.

1. TYPE OF WELL OIL WELL <input checked="" type="checkbox"/> GAS WELL <input type="checkbox"/> OTHER _____		5. LEASE DESIGNATION AND SERIAL NUMBER: UTU-80907
2. NAME OF OPERATOR: Wolverine Gas and Oil Company of Utah, LLC		6. IF INDIAN, ALLOTTEE OR TRIBE NAME: NA
3. ADDRESS OF OPERATOR: 55 Campau NW CITY Grand Rapids STATE MI ZIP 49503-2616		7. UNIT or CA AGREEMENT NAME: Wolverine Federal Unit
PHONE NUMBER: (616) 458-1150		8. WELL NAME and NUMBER: Wolv. Fed. Arapien Valley 24-1
4. LOCATION OF WELL FOOTAGES AT SURFACE: 2331' FNL, 549' FWL		9. API NUMBER: 4303930030
QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN: SWNW 24 20S 1E S		10. FIELD AND POOL, OR WILDCAT: Wildcat

COUNTY: Sanpete

STATE: UTAH

## 11. CHECK APPROPRIATE BOXES TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA

TYPE OF SUBMISSION	TYPE OF ACTION		
<input type="checkbox"/> NOTICE OF INTENT (Submit in Duplicate) Approximate date work will start: _____	<input type="checkbox"/> ACIDIZE	<input type="checkbox"/> DEEPEN	<input type="checkbox"/> REPERFORATE CURRENT FORMATION
	<input type="checkbox"/> ALTER CASING	<input type="checkbox"/> FRACTURE TREAT	<input type="checkbox"/> SIDETRACK TO REPAIR WELL
	<input type="checkbox"/> CASING REPAIR	<input type="checkbox"/> NEW CONSTRUCTION	<input type="checkbox"/> TEMPORARILY ABANDON
	<input type="checkbox"/> CHANGE TO PREVIOUS PLANS	<input type="checkbox"/> OPERATOR CHANGE	<input type="checkbox"/> TUBING REPAIR
	<input type="checkbox"/> CHANGE TUBING	<input type="checkbox"/> PLUG AND ABANDON	<input type="checkbox"/> VENT OR FLARE
<input checked="" type="checkbox"/> SUBSEQUENT REPORT (Submit Original Form Only) Date of work completion: _____	<input type="checkbox"/> CHANGE WELL NAME	<input type="checkbox"/> PLUG BACK	<input type="checkbox"/> WATER DISPOSAL
	<input type="checkbox"/> CHANGE WELL STATUS	<input type="checkbox"/> PRODUCTION (START/RESUME)	<input type="checkbox"/> WATER SHUT-OFF
	<input type="checkbox"/> COMMINGLE PRODUCING FORMATIONS	<input type="checkbox"/> RECLAMATION OF WELL SITE	<input checked="" type="checkbox"/> OTHER: Activity Update
	<input type="checkbox"/> CONVERT WELL TYPE	<input type="checkbox"/> RECOMPLETE - DIFFERENT FORMATION	

12. DESCRIBE PROPOSED OR COMPLETED OPERATIONS. Clearly show all pertinent details including dates, depths, volumes, etc.

**CONTINUED CONFIDENTIAL STATUS REQUESTED**

The drilling rig was released on 2/28/2008 and moved off location. Testing and completion activities have been temporarily suspended since August 15, 2008 and are expected to resume on October 2, 2008 after appropriate regulatory approval to continue testing is received.

NAME (PLEASE PRINT) <u>Ellis M. Peterson</u>	TITLE <u>Senior Production Engineer</u>
SIGNATURE <u><i>Ellis M. Peterson</i></u>	DATE <u>9/26/2008</u>

(This space for State use only)

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**OCT 02 2008**  
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FORM 9

**STATE OF UTAH**  
DEPARTMENT OF NATURAL RESOURCES  
DIVISION OF OIL, GAS AND MINING

**SUNDRY NOTICES AND REPORTS ON WELLS**

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QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN: SWNW 24 20S 1E S		10. FIELD AND POOL, OR WILDCAT: Wildcat
COUNTY: Sanpete		STATE: UTAH

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<input type="checkbox"/> SUBSEQUENT REPORT (Submit Original Form Only) Date of work completion: _____	<input type="checkbox"/> CHANGE WELL NAME	<input type="checkbox"/> PLUG BACK	<input type="checkbox"/> WATER DISPOSAL
	<input type="checkbox"/> CHANGE WELL STATUS	<input type="checkbox"/> PRODUCTION (START/RESUME)	<input type="checkbox"/> WATER SHUT-OFF
	<input type="checkbox"/> COMMINGLE PRODUCING FORMATIONS	<input type="checkbox"/> RECLAMATION OF WELL SITE	<input type="checkbox"/> OTHER: _____
	<input type="checkbox"/> CONVERT WELL TYPE	<input type="checkbox"/> RECOMPLETE - DIFFERENT FORMATION	

12. DESCRIBE PROPOSED OR COMPLETED OPERATIONS. Clearly show all pertinent details including dates, depths, volumes, etc.

**CONTINUED CONFIDENTIAL STATUS REQUESTED**

Approval is hereby requested to flare gas for a period of 60 days while production testing the Navajo2 Formation at the Wolverine Federal Arapien Valley 24-1 well. This is requested to establish stabilized producing rates and help determine commercially. Additional details are provided in the cover letter to this notice and in the attached Completion Summary and Results.

Attachments: Completion Summary and Results, Well Bore Schematic

**COPY SENT TO OPERATOR**Date: 11.4.2008Initials: KSNAME (PLEASE PRINT) Ellis M. PetersonTITLE Senior Production EngineerSIGNATURE Ellis M. PetersonDATE 10/21/2008

(This space for operator use only)  
**APPROVED BY THE STATE**  
**OF UTAH DIVISION OF**  
**OIL, GAS, AND MINING**  
DATE: 11/3/08

Federal Approval Of This  
Action Is Necessary

**RECEIVED****OCT 22 2008**

(5/2000)

BY: [Signature]

(See Instructions on Reverse Side)

DIV. OF OIL, GAS &amp; MINING

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\*4649-3-19 - necessary deliverability test - a flare stack should be employed during extended testing



## **Completion Summary and Results**

**Wolverine Federal Arapien Valley 24-1**

**Providence Field**

**April 7, 2008 to Present (October 21, 2008)**

**Purpose of Work: Complete and test Navajo2 and Navajo1**

### **Work Summary:**

1. Drilled out stage cementing tool at 9931' KB.
2. Ran a bit and casing scraper to PBTD and cleaned tubing and casing with caustic/acid solutions.
3. Ran a gyro directional survey from PBTD to surface.
4. Ran a radial CBL from wireline tagged PBTD of 12,620' to 12,000' with 0, 1000, and 3500 psi and from 12,000' to 2990' with no pressure.
5. Perforated Navajo2 at 12,373' - 12,380' using 3-3/8" hollow carriers loaded with 6 SPF.
6. RIH with packer on 2-7/8" tubing and set packer at 12,313'.
7. Swabbed well and recovered primarily water with strong gas blow before packer was found to be leaking.
8. Tripped tubing to change packer and set new packer at 12,311'.
9. Installed T-pack/dehy combo unit to allow separation and metering during flow testing.
10. Opened well to blow down tubing pressure and Hydrogen Sulfide gas was detected in gas at concentrations of 800 to 1000 ppm.
11. Swabbed water to establish flow and well flowed 16 hours before loading up. Recovery was approximately 113 BO with no water with or stable gas measurement. Well loaded up because the packer failed.
12. Released and pulled packer.
13. Set a CIBP at 12,369' and dump bailed 2 sacks of cement on top of CIBP.
14. Perforated Navajo2 at 12,290' - 12,316' using TCP guns loaded 6 SPF.
15. Flowed well for 12 hours and then ran and set down-hole pressure gauges with wireline. Produced for another 5 hours and shut well in for a pressure buildup.
16. Opened well after 87 hours, flowed through the T-pak for four days, and shut in for pressure buildup for 72 hours. Total recovery from the isolated perforation interval was 1338 BO, 122 BW, and 4.0 MMCF (gross field estimates) and the final flow rate was 160 BOPD, 20 BWPD, and 473 MCFD at FTP of 200 psi.
17. Pulled pressure gauges and collected bottom-hole fluid samples by wireline.
18. Set CIBP at 12,280'.
19. Pumped a balanced cement plug consisting of 25 sacks (6.2 Bbls) of premium cement containing 20% silica flour to fill 280' on top of CIBP.
20. Set a CIBP at 9418' and dump bailed 2 sacks of cement on top of CIBP.
21. Perforated Navajo1 at 9217' - 9222' using TCP guns loaded 6 SPF.
22. Swabbed and flowed well for 20 hours. Recovered 22 BO, 405 BW, and 0.2 MMCF (gross field estimates) in 20 hours with a final flow rate of 48 BOPD, 550 BWPD, and 300 MCFD at FTP of 115 psi.

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23. Set a CICR at 9205' and squeezed the Navajo1 perforations at 9217'- 9222' with 50 sacks (12.5 Bbls) of premium cement containing 20% silica flour. Dumped last 0.5 Bbl of cement on top of CICR and reverse circulated with end of tubing at 9190'.
24. Perforated Navajo1 at 9160'- 9166' and 9145'- 9154' using 4" hollow carriers loaded with 6 SPF.
25. Swabbed and flowed with plunger lift with limited inflow.
26. Broke down Navajo1 perforations at 9160'- 9166' and 9145'- 9154' using a total of 114 Bbls of 4% KCl water and additives and 120 ball sealers.
27. Swabbed and flowed from Navajo1 perforations at 9160'- 9166' and 9145'- 9154'. Recovered 550 BO, 129 BW, and 1.5 MMCF (gross field estimates) in 2 days with a final flow rate of 150 BOPD, 72 BWPd, and 713 MCFD at FTP of 420 psi.
28. Set bridge plug at 9138', and pulled packer and tubing.
29. Perforated Navajo1 at 9104'- 9131' using 4" hollow carriers loaded with 6 SPF.
30. Wireline set packer with pump-out disk at 9000', ran tubing, and latched packer with tubing.
31. Flowed well from perforated interval at 9104'- 9131' for five days with final rate of 120 BOPD, 120 BWPd, and 700 MCFD at FTP of 250 psi.
32. Broke down Navajo1 perforations at 9104'- 9131' using a total of 148 Bbls of 4% KCl water and additives and 240 ball sealers.
33. Flowed well from perforated interval at 9104'- 9131' for two days with final rate of 163 BOPD, 160 BWPd, and 1183 MCFD at FTP of 380 psi. Total recovery from perforated interval at 9104'- 9131' was 964 BO, 941 BW, and 6.3 MMCF (gross field estimates).
34. Pulled RBP and packer. Ran a new packer and set it at 9048' to produce Navajo1 perforations at 9104'- 9166'.
35. Ran and set bottom-hole pressure gauges.
36. Swabbed well and turned to production.
37. Flowed well through test unit for two days and then shut well in for a pressure build-up.
38. Pulled pressure gauges and collected bottom-hole fluid samples by wireline.
39. Flowed well and ran a production log. Recovery during testing of commingled intervals at 9104'- 9166' totaled 2215 BO, 2910 BW, and 9.7 MMCF (gross field estimates). Final producing rate from the three combined perforation intervals at 9104'- 9166' was 128 BOPD, 217 BWPd, and 740 MCFD with FTP of 330 psi.
40. Squeezed cemented 100 sacks (22.6 Bbls) of 50:50 poz cement with latex into the perforations at 9104'- 9166' through a CICR at 9093'.
41. Perforated Navajo1 at 8942'- 8948' using TCP guns loaded 3 SPF.
42. Flowed well from perforations at 8942'- 8948' for three days and recovered 53 BO, 0 BW, and 0.7 MMCF. Final flow rate was 40 BOPD, 0 BWPd, and 354 MCFD on plunger lift with 110 psi FTP.
43. Pulled TCP assembly and packer. Wireline set a CICR at 8936'.
44. Squeezed cemented 50 sacks (10.6 Bbls) of 50:50 poz cement with latex into the perforations at 8942'- 8948' through the CICR at 8936'.

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45. Perforated Navajo1 at 8920' - 8922' and 8904' - 8914' with 3 SPF using 4" hollow carriers.
46. Set RBP at 8930' and packer at 8800'.
47. Swabbed tubing dry with no fluid inflow from perforations at 8920' - 8922' and 8904' - 8914'.
48. Moved RBP to 8898' and pulled packer.
49. Perforated Navajo1 at 8881' - 8883', 8865' - 8871', and 8854' - 8860' with 3 SPF using 4" hollow carriers.
50. Ran packer and set it at 8746'.
51. Swabbed tubing dry with no fluid inflow from perforations at 8881' - 8883', 8865' - 8871', and 8854' - 8860'.
52. Moved packer to 8930'.
53. Broke down Navajo1 perforations at 8854' - 8922' using a total of 56 Bbls of 4% KCl water and additives and 150 ball sealers.
54. Swabbed perforations at 8854' - 8922' with no significant fluid recovery.

Immediate plans are to squeeze cement into the perforations at 8854' - 8922' using a CICR and 50 sacks (10.6 Bbls) of 50:50 poz cement. Then cement and plugs will be drilled out to perforations at 12,290' - 12,316' in anticipation of fracture stimulating and flow testing the Navajo2.

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**Wolverine Federal Arapien Valley 24-1**  
**Providence Field**  
**API # 43-039-30030**  
**Section 24, T20S, R1E**  
**Sanpete County, Utah**

(Not to Scale)

Ground Elevation: 5,554'  
 KB Elevation: 5,580'

**Vertical Well**

Surface: 2331' FNL 549' FWL, SW NW, 24-20S-1E  
 Total Depth (Estimated): 2383' FNL 617' FWL, SW NW, 24-20S-1E

**Conductor Casing (10/3/07)**

Size: 24", 0.25" wall in 32" hole  
 Depth Landed: 120' KB  
 Cement Data: Cemented to surface with 8 yds redi-mix

**Surface Casing (11/14/07)**

Size/Wt/Grade: 13 3/8", 68#, J-55, BTC, in 17.5" hole  
 Depth Landed: 2017' KB  
 Cement Data: 405 sks CBM Light (10.5 ppg, 4.14 cf/sk), 410 sks Type III (14.8 ppg, 1.33 cf/sk), Cemented to surface

**Intermediate Casing (1/21/08)**

Size/Wt/Grade: 9-5/8", 4737' of 53# HCP-110 and 5636' of 47# HCL-80, LTC, 8rd in 12.5" hole  
 Depth Landed: 10,373' KB  
 Cement Data: 2620 sks foamed Elastiseal (14.3 ppg, 1.48 cf/sk)  
 630 sks non-foamed Elastiseal (14.3 ppg, 1.48 cf/sk)  
 Note: N2 break-through and foamed cement to surface.

**Production Casing (2/27/08)**

Size/Wt/Grade: 5-1/2", 20#, P-110, LTC, 8rd  
 Properties: 12,640 psi burst, 4.653" drift, 4.778" ID, 0.0221 Bbl/ft Capacity  
 Depth Landed: 12,755' KB,  
 Stage tool @ 9950' KB, Marker Joint @ 12,110' - 12,125.5'  
 Cement Data: Stage 1 - 735 sks 50:50 Poz-Premium (12.5 ppg, 1.85 cf/sk)  
 Stage 2 - 1635 sks Class G (15.5 ppg, 1.20 cf/sk)

**Navajo2 Perforations**

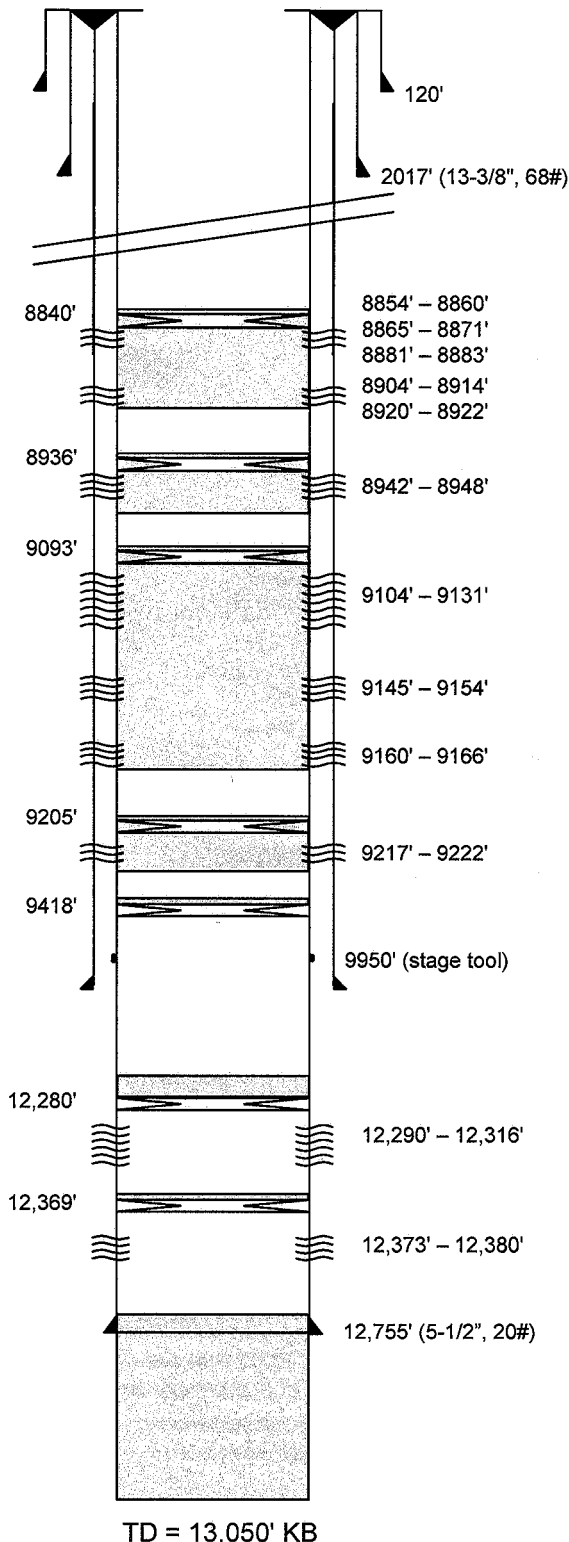
12,290' - 12,316' MD (12,287' - 12,313' TVD), 26', 156 holes (below CIBP)  
 12,373' - 12,380' MD (12,370' - 12,377' TVD), 7', 42 holes (below CIBP)

**Navajo1 Perforations**

8854' - 8860' MD (8853' - 8859' TVD), 6', 18 holes (squeezed)  
 8865' - 8871' MD (8864' - 8870' TVD), 6', 18 holes (squeezed)  
 8881' - 8883' MD (8880' - 8882' TVD), 2', 6 holes (squeezed)  
 8904' - 8914' MD (8903' - 8913' TVD), 10', 30 holes (squeezed)  
 8920' - 8922' MD (8919' - 8921' TVD), 2', 6 holes (squeezed)  
 8942' - 8948' MD (8941' - 8947' TVD), 6', 18 holes (squeezed)  
 9104' - 9131' MD (9103' - 9130' TVD), 27', 162 holes (squeezed)  
 9145' - 9154' MD (9144' - 9153' TVD), 9', 54 holes (squeezed)  
 9160' - 9166' MD (9159' - 9165' TVD), 6', 36 holes (squeezed)  
 9217' - 9222' MD (9216' - 9221' TVD), 5', 30 holes (squeezed)

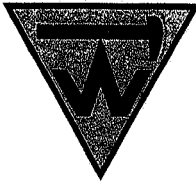
**PBTD**

Planned to be cement on CICR at 8840'  
 (8/7/08) 9188' - WL tagged cement on CICR @ 9205'  
 (4/29/08) 12,359' - 2 sacks cement on CIBP @ 12,369'  
 (4/12/08) 12,620' - CBL tag



TD = 13,050' KB

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# WOLVERINE GAS AND OIL CORPORATION

*Energy Exploration in Partnership with the Environment*

October 21, 2008

Mr. Dustin Doucet  
Utah Division of Oil, Gas and Mining  
P.O. Box 145801  
Salt Lake City, Utah 84114-5801

Re: Sundry Notices - Wolverine Gas and Oil Company of Utah, LLC  
Request for Extended Flaring  
**Wolverine Federal Arapien Valley 24-1**

RECEIVED

OCT 22 2008

Dear Mr. Doucet:

DIV. OF OIL, GAS & MINING

Wolverine Gas and Oil Company of Utah, LLC respectfully submits the enclosed Sundry Notice (Form 9) in duplicate for the referenced well. Please accept this letter as Wolverine's written request for confidential treatment of all information pertaining to this well.

Wolverine Federal Arapien Valley 24-1 appears to be a discovery well for what we refer to as the Providence Field. The well penetrated potentially productive intervals in Navajo1 and Navajo2 (sub-thrust Navajo) and select perforation intervals have been flow tested in both formations. However, testing of the Navajo2 (at ~12000') was limited in duration because of the presence of H<sub>2</sub>S in the associated gas stream and the false expectation that the Navajo1 (at ~9000') would produce oil without large quantities of associated gas. While testing both the Navajo1 and Navajo2 formations, total gross field estimated volumes of 5255 BO and 22.4 MMCF were produced over a period exceeding 30 producing days (with BLM and UDOGM approval). Produced gas was flared and vented during this testing period as necessary because the well is remotely located and there are no gas gathering and processing facilities available in the area.

The Navajo1 Formation was found to produce high CO<sub>2</sub> content gas and oil. It is anticipated that the Navajo1 gas will be reinjected during oil recovery operations. Multiple development wells and construction of considerable field infrastructure will therefore need to occur before long-term Navajo1 production is initiated.

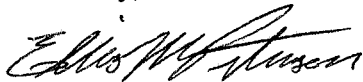
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The Navajo2 produced high BTU gas with oil, but pressure transient analysis indicates that the formation has low permeability and potential for long term commercial production is questionable. At the end of the 3-day flow test of a 26-foot perforation interval, producing rates were 160 BOPD, 20 BWPD, and 473 MCFD and decreasing. Fracture stimulation can typically improve the long term producing capability of tight formations, so fracture stimulating the Navajo2 is recommended in conjunction with flow testing to better define its commercial viability.

In order to conduct a stabilized production test of the Navajo2 and to determine commerciality of the Navajo2 reservoir, an extended period of flow testing the Navajo2 with flaring of gas is requested per Rules R649-3-19 and R649-3-20. The requested testing and flaring period is 60 days to allow limited production prior to fracture stimulating the formation and then achieve stabilized production rates following the proposed fracture stimulation. During the 60 days of production, it is anticipated that up to 90 MMCF of gas could be flared.

To initiate this planned test without significant delay, your expedited approval of the attached Sundry Notice is respectfully requested. The subject well is on Federal land so BLM approval for this action will also be requested.

Sincerely,



Ellis M. Peterson  
Senior Production Engineer  
Wolverine Gas and Oil

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UNITED STATES  
DEPARTMENT OF THE INTERIOR  
BUREAU OF LAND MANAGEMENT

FORM APPROVED  
OMB No. 1004-0137  
Expires: March 31, 2007

**SUNDRY NOTICES AND REPORTS ON WELLS**

*Do not use this form for proposals to drill or to re-enter an abandoned well. Use Form 3160-3 (APD) for such proposals.*

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**SUBMIT IN TRIPLICATE- Other instructions on reverse side.**

1. Type of Well  
☒ Oil Well ☐ Gas Well ☐ Other

2. Name of Operator  
**Wolverine Gas and Oil Company of Utah, LLC**

3a. Address  
**55 Campau NW, Grand Rapids, MI 49503**

3b. Phone No. (include area code)  
**616-458-1150**

4. Location of Well (Footage, Sec., T., R., M., or Survey Description)  
**2331' FNL, 549' FWL, Sec. 24, T20S, R1E, SLB&M**

5. Lease Serial No.  
**UTU-80907**

6. If Indian, Allottee or Tribe Name  
**NA**

7. If Unit or CA/Agreement, Name and/or No.  
**Wolverine Unit**

8. Well Name and No.  
**Wolverine Federal Arapien Valley 24-1**

9. API Well No.  
**43-039-30030**

10. Field and Pool, or Exploratory Area  
**Wildcat**

11. County or Parish, State  
**Sanpete County, Utah**

**12. CHECK APPROPRIATE BOX(ES) TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA**

TYPE OF SUBMISSION	TYPE OF ACTION			
<input type="checkbox"/> Notice of Intent	<input type="checkbox"/> Acidize	<input type="checkbox"/> Deepen	<input type="checkbox"/> Production (Start/Resume)	<input type="checkbox"/> Water Shut-Off
<input checked="" type="checkbox"/> Subsequent Report	<input type="checkbox"/> Alter Casing	<input type="checkbox"/> Fracture Treat	<input type="checkbox"/> Reclamation	<input type="checkbox"/> Well Integrity
<input type="checkbox"/> Final Abandonment Notice	<input type="checkbox"/> Casing Repair	<input type="checkbox"/> New Construction	<input type="checkbox"/> Recomplete	<input checked="" type="checkbox"/> Other <b>Activity Update</b>
	<input type="checkbox"/> Change Plans	<input type="checkbox"/> Plug and Abandon	<input type="checkbox"/> Temporarily Abandon	
	<input type="checkbox"/> Convert to Injection	<input type="checkbox"/> Plug Back	<input type="checkbox"/> Water Disposal	

13. Describe Proposed or Completed Operation (clearly state all pertinent details, including estimated starting date of any proposed work and approximate duration thereof. If the proposal is to deepen directionally or recompleat horizontally, give subsurface locations and measured and true vertical depths of all pertinent markers and zones. Attach the Bond under which the work will be performed or provide the Bond No. on file with BLM/BIA. Required subsequent reports shall be filed within 30 days following completion of the involved operations. If the operation results in a multiple completion or recompleat in a new interval, a Form 3160-4 shall be filed once testing has been completed. Final Abandonment Notices shall be filed only after all requirements, including reclamation, have been completed, and the operator has determined that the site is ready for final inspection.)

Please see the attached compilation of daily reports as an update of testing and completion activities at this exploratory well.

14. I hereby certify that the foregoing is true and correct  
Name (Printed/Typed)

**Ellis Peterson**

Title **Sr. Production Engineer**

Signature

*Ellis Peterson*

Date

**06/20/2008**

**THIS SPACE FOR FEDERAL OR STATE OFFICE USE**

Approved by **Accepted for RECORDS PURPOSE**

Conditions of approval, if any, are attached. Approval of this notice does not warrant or certify that the applicant holds legal or equitable title to those rights in the subject lease which would entitle the applicant to conduct operations thereon.

Title

Date

**7-29-08**

Office

Title 18 U.S.C. Section 1001 and Title 43 U.S.C. Section 1212, make it a crime for any person knowingly and willfully to make to any department or agency of the United States any false, fictitious or fraudulent statements or representations as to any matter within its jurisdiction.

(Instructions on page 2)

09 PH 00145  
UQ06M

**RECEIVED**

**OCT 30 2008**

**DIV. OF OIL, GAS & MINING**



# Wolverine Gas And Oil Company of Utah LLC

*Energy Exploration in Partnership with the Environment*

Providence Field Federal AV 24-1

SW/NW Section 24, T20S, R1E API # 43-039-30030

Sanpete Co Utah

3/25/2008 Dirt contractors dug out soft spots in location & recompact in dry material.

3/26/2008 Dirt contractors dug out soft spots in location & recompact in dry material.

3/27/2008 Dirt contractors dug out soft spots in location & recompact in dry material. Roustabouts picked up garbage along lease road & plumbed in surface casing valve on well head.

3/28/2008 Dirt contractors dug out soft spots in location & recompact in dry material. Roustabouts worked on plumbing in production treater.

3/29/2008 No activity

3/30/2008 No activity

3/31/2008 Set rig anchors, installed wellhead, roustabouts worked on plumbing in production treater & 400 bbl oil tanks.

4/1/2008 Installed riser & valve on production casing, staged frac tanks for completion rig, worked on plumbing for production treater.

4/2/2008 Roustabouts dug flowline ditch for flowline to treater, worked on plumbing for 400 bbl oil tanks, cut off casing for rat hole & mouse hole & filled casings with cement.

4/3/2008 Worked on welding in temp flowline to treater area.

4/4/2008 Finished welding in flowline & backfilled ditch line.

4/5/2008 No activity

4/6/2008 No activity

4/7/2008 Road rig to location. spot and rig up. spot and set catwalk. SWIFN  
Plan to install 7" 10K bop's and PU bit and collars & RIH w/ tbg .

4/8/2008 Spot pump & tank. nipple up bop's then floor. tally BHA and tbg. Start in the hole with BHA & tbg. Tag up on stage tool @9900' kb lay down 1 joint and PU Swivel make up and SWIFN  
Roustabouts worked on production treater.  
Plan to drill out stage tool

4/9/2008 Break circulation and start to turn on bit. Drilled out cement and tagged stage tool @ 9931' KB. Drilled out stage tool and circulated bottoms up. POOH w/tbg and collars, bit. Lay down collars and PU 5 1/2" csg scraper  
Did have 82' of cement above stage tool. RIH w/scraper. EOT @ 1350' KB SWIFN  
Plan to RIH and tag up PBDT.

4/10/2008 Open up well and run tbg out of the derick. Pu tbg off the ground. tag PBDT @ 12,618' KB  
SWIFN  
Plan to pickle tbg in am w/Superior well services

4/11/2008 Bring in equipment. mix 4% kcl in tanks. RU Superior well services to pump pickle job. pump job and RD superior and start out of the w/tbg and scraper.  
EOT @ 8628'KB SWIFN  
Plan to POOH w/tbg and run Gyro and CBL

4/12/2008 RU Schlumberger wireline. PU Scientific drilling tools on wireline and RIH and run directional survey. POOH w/directional tools. RIH w/Radial CBL, Tag PBDT @ 12,620'. Run short strip from 12,620' to 12,000. cement bond did not look good. decide to run same pass with 1000 psi, pressure did improve RCBL. Pulled tools



from 12,000' - to cement top approx. 2990' w/ no pressure SWIFN

Plan to rerun lower initial pass from 12,620' - to 12,000' w/3500 psi

4/13/2008 RU wireline. PU Pressure equipment and RIH w/RCBL to PBTD @ 12,620' and pressure up well to 3500 psi. Pull tools up to 11,900', bleed off pressure and POOH w/tools. RD down wireline. PU and RIH with s/n and 4000' tbg, test well to 4800 psi. Good test 15min. bleed down well and RU to swab. swabbed well down to 2500'. POOH with tbg and s/n. SWIFN

Plan to perforate interval from 12,373' - 12,380'.

4/14/2008 RIH with 3 3/8" gun, 6spf @ 60 degree phasing, 24 gram charges with .40" holes. Perforate from 12,373' - 12,380'. POOH w/gun and lay down PU and RIH w/wireline set pkr to set @ 12,300'. PKR hung up @ 2593'KB. Tried to work pkr loose but to no avail. Decide to set pkr and POOH w/wireline and setting tool. Set pkr and setting tool did not shear off, worked for about 1/2 hr and setting tool came free. POOH with setting tool. RD wireline and release. PU and RIH w/ on/off skirt and tbg, latch up to top of pkr @ 2699'KB tbg measurement tried to set weight on pkr - pkr slid down, pulled up - PKR held, set down - PKR took weight, worked until free. POOH with no pkr, run back in the hole and tag pkr @ 2710' KB. Moved down hole 10' and set. Try to work pkr free - keeps slipping off.

SWIFN

Plan to pull pkr out of the hole. RIH w/HD pkr, set and swab perms @ 12,373' - 12,380'

4/15/2008 Open well 60psi.bleed down.RIH and circulate down to PKR. Circulated 80bbbls of 4%KCL set down on PKR then pulled over 15k.set in neutral position and pump out plug. PU and release PKR and start out of the hole. lay down PKR and did not find anything wrong with tool. PU 2 joints,arrowset 1 PKR and s/n then rest of tbg. RIH @ 6336' KB. shut down due to high wind. SWIFN

Roustabouts started transporting production equipment to loc & started site work for oil tanks & treater

Plan to RIH and set PKR @ 12,300' KB.RU to swab

4/16/2008 Opened well csg/310psi- tbg/280psi .bleed down and finish RIH w/PKR. set PKR @ 12,313' KB. Fill csg w/10bbbls 4%. Test 1500psi 15min.good test RU to swab made 10 runs then well unloaded with hard gas flow for 20 min.then well loaded up.RIH w/ swab and made 5 more runs. recovering 96 total bbls. SWIFN

Roustabouts worked on tank battery construction.

Plan to swab and recover more info on well

4/17/2008 Opened well (csg 100 psi, tbg 1060 psi). blew down tbg and RU to swab. IFL @ 4400' - FL@ 3000' After each run well flowed gas for 10-15 min each time. Recovered 79 total bbls fluid, after run # 8 csg had 945psi.tried to bleed down but would not get down below 100psi. Decide to test annulus, hook up to csg with rig pump and pumped 145 bbls and caught circulation up tbg. Returns consisted of gaseous fluid, shut down rig pump and returns stopped. Finished pumping annulus volume of 173bbbls hook up to the tbg and pump 45 bbls down @ 750 psi and csg came around. decide to release PKR and RIH below perms and try and set PKR and test. PU and release PKR tbg had 700 psi on it. Hook up to tbg and pump tbg volume of 71 bbls. Well circulated tbg laying dead. RIH to 12,520'KB. Set and try to test. no test Well circulated .release PKR and start out of the hole. pulled 70 stands SWIFN EOT @ 8000'

Plan to pull pkr and RIH w/new HD/PKR

Roustabouts continue on tank battery construction

4/18/2008 Opened well 50psi on both csg & tbg. Bleed down and continue POOH w/tbg and arrowset PKR. Lay down arrowset and PU HD PKR. run back in the hole. @ 8400' KB well started to flow up tbg hook up and pump 15 bbls 4% to kill tbg. Finish RIH and set PKR @ 12,311' KB. EOT @ 12,377'KB

Fill csg w/ 18 bbls . Test 1500psi for 25 min. good test. RU to swab.

made 7 runs recovering 65 bbls. IFL @ 900', FFL @ 2600'

SWIFN ( after 30 min tbg had 750psi buildup)

Roustabouts finishing up on tank battery

Plan to shut down till 4/21/2008

4/19/2008 SI tbg pressure 1225 psi, csg pressure 750 psi. Waiting on delivery of T-pak/dehy combo unit & flare stack.  
Plan to leave well SI until T-pak & flare are hooked up for flowback testing. Estimated to start flowback testing on Wednesday 4/23/08.

4/20/2008 SI tbg pressure 1225 psi, csg pressure 750 psi. Unloaded T-pak/dehy combo unit & VOC flare stack.  
Plan to start tie ins on production unit.

4/21/2008 SI tbg pressure 1275 psi, csg pressure 750 psi. Roustabouts worked on hooking up flare line to pit & T-pak hook up.

4/22/2008 SI tbg pressure 1275 psi, csg pressure 750 psi. Completed all hook ups for well testing, opened well & flowed for 20 minutes to level off T-pak; at this time the H2s monitoring equipment detected H2s levels beyond the interments range (meter over range @ 500 ppm). Well was SI & will remain SI until our safety group can get additional monitoring equipment on location & arrange for gas samples to be taken to confirm actual ppm of H2s that are present in the gas flows. (Initial flow rate - 200 MCF - 245 tbg psi on 20/64 choke with continuous oil inflow. Oil flow was not measured due to safety.)

4/23/2008 SI tbg pressure 650 psi, csg pressure 980 psi. Roustabouts cleaned up location & removed construction equipment. Arrangements have been made with Frandson Safety to provide H2s training & equipment onsite at midday tomorrow.

Plan to provide onsite H2s training & equipment for all personnel who may be exposed to onsite H2s gasses.

4/24/2008 SI tbg pressure 675 psi, csg pressure 980 psi. Set up H2s rescue packs, gas detection, wind socks & warning signs. Held H2s safety training & certified all personnel to work & perform rescues in H2s environments.

RU swab equipment & made 3 swab runs recovering 12 bbls of fluid, mostly water.

Plan to continue swabbing on well until continuous flows are established.

4/25/2008 Opened well TBG 500psi . CSG 750psi .bleed down tbg, and RU to swab IFL @ 2000'

Made a total of 15 runs. recovering 137 bbls fluid. well tried to flow after each run.FFL @ 4600' and well kicked off flowed well through out the night, and into the next day.

4/26/2008 continue flowing well through T-pak.

well flowed till 2pm then died off. SWIFN

Plan to RU and swab well on 2/28/2008

4/27/2008 no activity

4/28/2008 Opened well TBG 1380psi CSG 2700psi.Attempt to bleed down well through T-pak . Flared gas for 2 hrs and well psi was down to 800 psi and holding. Decide to pump down the tbg and load hole, but returns from csg to frac tank were very gassy, and wind became an issue with rig pump. Decide to move rig pump to south side of location. pumped approx. 195bbls 4% kcl prior to moving rig pump. Pumped another 95 bbls and well broke circulation. pumped a total 380 bbls and well laying dead. SWIFN

Plan to release PKR and POOH with tbg . Run CICR on wireline

4/29/2008 Opened well CSG 950psi TBG 0psi.bleed down 0psi but CSG started to surge fluid. Shut csg in and PU and release PKR . Open up CSG and circulate 180bbls 6% kcl. well dead. Start out of the hole. lay down 26 joints and the rest in the derick. lay down HD PKR. Elements gone off of the PKR.RU wireline and RIH W/ 5 1/2" CIBP and set @12,369'KB POOH w/setting tool. PU and RIH w/dump bailer /2 sacks of cement. dump cement on CIBP. POOH w/dump bailer and RD wireline. SWIFN.

Plan to PU TBG Conveyed perf gun and rest of BHA and Hydrotest 2 7/8" tbg

4/30/2008 OPSI on well. Leave well shut in. decide to wait on running TBG Conveyed gun and BHA till am on 5/1/2008 waiting on wellhead equipment trimmed for h2s.tbh hanger, landing pins and bonnet, upper tree assembly  
Plan to run TBG conveyed guns and BHA  
Roustabouts started running vapor lines from 400 bbl tanks to the flare unit.

5/1/2008 Opened well and bled down well gas. 20 psi. make up TBG gun and rest of BHA and 2 3/8" tbh. operator could not stop the traveling blocks. had to engage emergency shut down. Secure well for night. Wait on mechanic.  
LEED ENERGY mechanic concluded that all was well with the braking system for main drum. return to normal operations in am.  
Roustabouts installed vapor lines for 400bbl tanks and installed flare unit, also installed flow meters in T-pak  
Plan to RIH w/ tbh gun and rest of BHA then tbh.

5/2/2008 Opened well.0 psi. PU pkr and the rest of the BHA. Start hydro testing tbh in the hole. Ran to 9000'KB SWIFN.  
Roustabouts tied in frac tanks to production tanks for more storage capacity.  
Plan to finish RIH w/ tbh and BHA. landing tbh and perforate well

5/3/2008 Opened well and finished RIH w/ BHA and tbh. set gun top shot @ 12,290'. RU wireline and run correlation log.  
PU tbh subs and set PKR. Wait on well head equipment, land tbh on tbh hanger and ND floor and BOP'S. set tree on tbh head. test PKR @ 1500psi. Good test. tie flowline to wellhead. drop bar and shoot gun.  
had gas on tbh in 8 min. turn well over to flow testers.

5/4/2008 Flow tested well for 12 hrs to stabilize flow rates. SI well, RU slickline unit and lubricator, RIH with tandem electronic pressure bombs & set in 2 7/8" XN nipple, POOH with wireline, RD and released wireline unit then opened well to production. Flowed well for 5 hrs to try to establish steady rate - well was unloading large slugs of oil which made stabilization impossible. Shut well in for pressure build up.  
Plan to leave well SI for minimum of 72 hrs.

5/5/2008 Well is SI - see pressure build up tab for surface pressures

5/6/008 Well shut in for Pressure build up

5/7/2008 Well shut in for Pressure build up

5/8/2008 Opened well for flow back. CSG 300 psi / TBG 2100 psi  
Average flow rates 1mm gas, 409 bbls oil, 24 bbls water per day.  
Plan to continue flow testing.

5/9/2008 Continue flowing well through T-pak.  
Average flow rates to the hour: 888 m gas, 354 bbls oil, 13 bbls water per day.  
Plan to continue flow testing.

5/10/2008 Continued flowing well - Flow rates for 5/9/08 (784 m gas, 297 bbls oil, 17 bbls water) in 24 hrs.  
Well has been flowing steady rates for the last 12 hrs of 694 m gas, 240 bbls oil, 24 bbls water per day.  
Plan to continue flow testing.

5/11/2008 Continued flowing well  
Plan to flow well until 6 AM on the 12 then SI for pressure build up.

5/12/2008 Flowed well till 6am then shut in well for pressure build up.

5/13/2008 Well SI for pressure build up  
Plan to continue pressure build up test.

5/14/2008 Well SI for pressure build up  
Plan to pull bombs in the afternoon of the 15th

5/15/2008 AM psi TBG 1825 CSG 500. RU wireline and RIH and pull bombs. Lay down bombs and RIH

w/gauge ring. Made it down to 12,120' KB and got a little tight. Pulled out of the hole w/gauge ring  
RIH w/ tools to make gradient stops down to 12,000' KB. POOH w/ tools . Found BHT @ 244 degrees  
Fluid level @ 4215' KB. Did find trace of water @ 12,000 +/- RD wireline  
SWIFN

Plan to RIH and collect pressurized samples.

5/16/2008 RU wireline and RIH w/ pressurized canisters and collect two samples from 11,500' KB  
RD wireline and SWIFN.

Plan to wait till 5/20/2008 to rig up service unit . Waiting on results from samples

5/17/2008 no activity

5/18/2008 no activity

5/19/2008 no activity

5/20/2008 Move in Nabors well service unit. Spot unit and rig up. Spot pump and tank combo & catwalk/pipe racks  
Plan to kill well and POOH w/ BHA and TBG

5/21/2008 RU to tbg and pump 100 bbls of completion fluid. TBG dead. ND wellhead and NU bop's. RU floor and related equipment  
Bleed down CSG. PU and release PKR. RU and roll hole w/300 bbls completion fluid. start out of the hole w/ BHA and  
tbg. Pulled 50 stands, then the computer on the rig would not let the traveling blocks move. rig crew tried to reset the  
system . Did not work. secure well for the night. EOT @ 9000' KB .

Plan to have Nabors well service computer Tec come down and Diagnosis & fix the problem.

5/22/2008 Problem with computer on rig was Addressed . Back to normal operation. 0 pressure on well. POOH w/2 7/8" tbg  
lay down PKR and 2 3/8" tbg, and rest of BHA. RU J-W wireline and round trip a 4 5/8" gauge ring to 12,290'  
POOH w/ gauge ring. PU 5 1/2" CIBP and set @ 12,280' using schlumberger platform express log.  
POOH w/ setting tool. RD wireline. SWIFN

Plan to RIH w/ tbg and tag CIBP @ 12,280' and RU cement company to pump balance plug.

5/23/2008 Opened well . RIH w/ 2 7/8" tbg open ended down to top of CIBP @ 12,280' KB. Tag and pull up 2'  
RU Halliburton CO. to pump Balanced cement plug as per procedure. Pumped 5bbls of fresh ahead of the cement  
then 6.2 bbls of class g cement w/additives. Displace cement to bottom w/69bbls of fresh. lay down 10 joints then reverse  
w/52bbls CF , then 58 bbls 9# brine w/chemicals and displaced w/ 129 bbls CF. RD Halliburton and lay down 30 more  
joints of 2 7/8" tbg. SWIFN.

Plan to resume operations 5/27/2008. finish POOH w/tbg . Wireline in CIBP @9418' to plug back well.

5/24/2008 No activity

5/25/2008 No activity

5/26/2008 No activity

5/27/2008 Opened well. Finish laying down tbg for plug back of well. stand back the rest in the derrick. RU wireline. PU 5 1/2" CIBP  
and set @ 9418'. POOH and lay down setting tool. PU dump bailer w/ 2 sacks of cement & RIH and dump cement on CIBP  
lay down dump bailer. RD wireline. PU TCP assembly as per procedure then run tbg out of the derrick. EOT @ 3000' KB  
Plan to RIH w/ tbg and set then test. Drop bar to perforate @ 9217'-9222'

5/28/2008 Opened well. Finish RIH w/ tbg & TCP assembly. RU wireline to RIH and correlate using Platform express log dated 1/17/2008  
set PKR @ 8820' KB. RIH w/ wireline and check depths. POOH w/ wireline and RD wireline. test PKR 1500 psi. good test  
RU for flowback through manifold. Drop bar . Perforate 9217'-9222' instant pressure 10 psi. open well to tank and pressure  
bled off. RU to swab.

Made 4 runs, recovered 40 bbls fluid. IFL @3374' FFL@ 2300' SWIFN

Plan to swab well & recover fluid samples and establish rates

5/29/2008 Opened well tbg psi 360 csg psi 450. RU to swab. (refer to swab sheet for details)  
IFL @ 1822. made 6 runs and well kicked off flowing. Turn well over to flow testers

Plan to flow well

5/30/2008 Well shut in @ 6am till 10:30am for build up. TBG pressure built up to 700psi. Hook up to tbg and kill w/ 60 bbls 4% kcl. Nabors rig engine died and would not start. Wait till am on mechanic.

Plan to fix engine problem and resume killing well and POOH w/tbg and BHA.

5/31/2008 Opened well. TBG 0psi & CSG 0psi. Mechanic found and fixed problems with the rig . PU and release PKR . reverse well with 200 bbls of completion fluid. POOH w/ tbg and TCP BHA. SWIFN

Plan to RIH w/ CICR and squeeze off perms @ 9217'-9222'

6/1/2008 Opened well 0psi on well. PU & RIH w/ 5 1/2" CICR and set @ 9205' KB .test csg 1000psi 15 min. good test bleed down. hook up to tbg and fill .establish an injection rate of 2.5bbls pm @ 900psi.

SWIFN

Plan to squeeze off perms @ 9217'-9222' in am

6/2/2008 Opened well. RU Halliburton cement company. hold safety meeting then pressure test iron 3000 psi. fill tbg and establish injection rate. 2.5bpm @ 2000psi, pump 22 bbls. Start in with cement. clear cement, then start displacement down @ 1.5 bpm with 3.8 bbls of cement left in tbg slowed rate down to 1/2bpm 700 psi. pumped 3.3 bbls away leaving 1/2 bbl in tbg. sting out, dumping remaining 1/2 bbl on top of retainer. Pull up to 9190' and reverse out with 70 bbls completion fluid. Pressure prior to stinging out of CICR was 1500psi. RD Halliburton . POOH to 4000' KB and RU and swabbed well down to 2500'. SWIFN

Plan to POOH w/tbg and perforate 9160'-9166' , 9145'-9154'

6/3/2008 Opened well 0psi. Finish POOH w/tbg and stinger. RU wireline. PU and RIH gun to perforate from 9160'-9166', 9145'-9154' Referenced depths off CBL dated 4/12/2008 9158'-9164', 9143'-9152'. shoot gun and no initial pressure. POOH w/gun. Shot well w/.40 diameter holes. 4" carriers, 6 spf on 60 degrees phasing with 25 gram charges. RD wireline. PU and RIH w/ 5 1/2" RBP - 1 joint 2 3/8" tbg- 5 1/2" PKR. then rest of tbg. Set plug @ 9180" KB set PKR @ 90. TEST PKR to 1000psi. Good test. RU to swab.

made 11 total runs, recovering 74 bbls of fluid. IFL @ 2000' FFL @ 8500'

SWIFN

Plan to swab and recover more data

6/4/2008 AM report - well filled tubing from 9000' & flowed 29 bbls of oil to the frac tank overnight with steady gas.

Recovered 44 bbls oil & 27 bbls water to date.

RU and make 1 swab run. IFL @ 8000'. Recovered 5 bbls fluid. heavy gas during run. hang back swab

decide to send well to T-pak. Switch lines and flow well.

flared gas for 20 min. then flame died. Could not get gas to light after first burn.

Turned well over to flow testers

6/5/2008 Shut well in @ 9:30 for pressure build up.

6/6/2008 Well SI - no activity

6/7/2008 Well SI - no activity

6/8/2008 Well SI - no activity

6/9/2008 Well SI - no activity (Tubing psi 1050, Csg psi 300)

Plan to open well & flow for clean up.

6/10/2008 Installed plunger lift on well & turned into production @ 6:00 PM

6/11/2008 Well produced 15 bbls of oil & 48 bbls of water over night. SI pressures between trips averaged 240 psi with 1 1/2 hrs SI between trips.

6/11/2008 Continued to flow well on plunger lift - well leveled out at rates of 120 bbls oil, 0 bbls water & 300 MCF in 24 hrs. Average pressure between trips was 380 psi (1 hr SI) Recovered 93 bbls oil & 63 bbls of water on plunger lift. Plan to rig up Halliburton & break down perf interval 9145'-9154' and 9160'-9166' using completion water.

6/12/2008 SI well, pulled plunger, RIH & retrieved bumper spring, RU Halliburton, held safety meeting, pressure tested lines to 6350 psi. Opened bypass on pkr & pumped 14.2 bbls of breakdown fluid consisting of 4% KCL completion fluid mixed with Halliburton's GasPerm 1000, SD due to faulty pressure sensor on pump line, repaired sensor, resumed pumping @ 1.5 bpm with 215 psi on the tubing. Pumped a total of 25 bbls of breakdown fluid then started dropping buoyant balls throughout the 600 gallon stage (60 balls total in this stage) then started dropping bioballs after pumping a total of 37.8 bbls, (dropped 60 bioballs in this 600 gallon stage). Shut down & closed pkr bypass with 20,000# compression. Resumed pumping the final 2350 gallon stage @ 4.5 bpm with 2650 psi on tubing. Initially the pressure peaked at 2950 psi then continued to fall until 77 bbls of total fluid was pumped, the tubing pressure then started climbing indicating ball action throughout the remainder of the stage. The peak pressure was 3359 psi with a constant rate of 4.5 bpm throughout the stage. Shut down, (ISIP 2650) monitored shut in pressure for 25 minutes (tubing pressure fell to 0 psi in 20 minutes) SWIFN.  
Note: Pumped a total of 114.27 bbls of KCL water (60 bbls into formation) A total of 120 balls were pumped.  
See attached pump reports for details.  
Plan to swab well in & test production rates.

6/13/2008 Open well. tbg on a vac RU to swab. IFL @ 2000'. Made 5 runs recovering 31bbls. Well started to flow  
Flowed well to frac tank, recovering 87 bbls flowed back .did recover frac balls in tank. send well to T-PAK @1600HRS  
turn well over to pumpers  
Plan to flow well and monitor rates

6/14/2008 Well still flowing thru T-PAK. Average hourly rates were tbg pressure 410 - gas rate 700m - 7 boph - 0 bwph  
continue flowing well  
Turned well over to pumpers  
Plan to flow well and monitor rates

6/15/2008 Relieved pumpers. Well flowed thru the night. Average flow rates were - tbg psi @ 400 - gas rate 800m/day - 7.9 boph  
3 bwph. Continue flowing well until 2:30 pm, then shut well in for night  
Plan to kill well and prepare to move up hole.

6/16/2008 Open TBG 1100 psi.bleed down pressure and RU and pump 30 bbls completion fluid down tbg. PU and release PKR  
RIH and latch up RBP and release and bring up to 9138' KB.Set and get off plug. Pull PKR up to 9051' KB .tested RBP  
got pressure to 1400 psi. No test. RIH and grab RBP release and pulled up to 9136' KB.plugin kept slipping after running  
through the motions to set. Tried to set and test 3 times. All three times after fighting plug to set could not get  
over 1400 psi . Pressure would bleed right down. Decide to POOH PKR & RBP. Elements on plug were ate up  
wait on hot shot w/ new RBP. SWIFN  
Plan to PU new plug, RIH, swab down and POOH w/ tbg

6/17/2008 Well on a vacuum in the am. Pu and RIH w/5 1/2" RBP. Set plug @ 9138'KB. Load well w/ 10bbls completion fluid.  
test plug to 3000 psi for 15min. Good test. bleed down well. roll hole w/ 160 bbls clean completion fluid.  
RU to swab. Swab well down to 2500'. Hang swab back & POOH w/ tbg and retrieving head. SWIFN  
Plan to perforate interval from 9104' - 9131' then RIH w/ tbg and PKR.

6/18/2008 Opened well csg on a vacuum. RIH w/ 5 1/2" HD PKR with 1 joint and Retrieving head to 4000' to test RBP,  
set PKR and test plug to 3000 psi 15 min. good test. POOH w/ BHA and tbg. RU Wireline, RIH w/4" carriers loaded 6spf  
.40 dia. Hole with 60 degrees phasing 25 gram charge. Shoot interval @ 9104' - 9131'. POOH w/gun, well on a blow  
Pu and RIH w/pump out ceramic disc sub - 6' x 2 3/8" pup - 2 3/8" xn 1.870 nipple - 6' x 2 3/8" pup - 5 1/2" Arrowset 1 PKR  
w/ 2 3/8" on/off tool seal sub. Set PKR @ 9000'. POOH w/ setting tool, RD wireline. RIH w/on/off skirt, 2 7/8" x 2 3/8" XO,  
1 joint 2 7/8" tbg - 2 7/8" x 2.225 SN, then rest of tbg. space out and land tbg w/ hanger in wellhead. Load csg w/15 bbls  
test 1500psi. Good test. Nipple down rig floor and BOP. Nipple up wellhead, pump out ceramic disc w/6 bbls & 1500 psi  
tbg went on a vacuum. RU swab equipment made 5 runs recovering 30bbls fluid. Well kicked off.

Turn well over to flow testers

Plan to rig down and move service unit off

6/19/2008 Well still flowing.rig down service unit.clean up location and move off.

Flow tested well - 681 mcfpd, 94 bopd, 105 bwpd

Plan to continue flow testing.

Supervisor:

*Fernanda Ortega*

Rig Operator:

UNITED STATES  
DEPARTMENT OF THE INTERIOR  
BUREAU OF LAND MANAGEMENT

FORM APPROVED  
OMB No. 1004-0137  
Expires: March 31, 2007

**SUNDRY NOTICES AND REPORTS ON WELLS**

*Do not use this form for proposals to drill or to re-enter an abandoned well. Use Form 3160-3 (APD) for such proposals.*

**SUBMIT IN TRIPLICATE- Other instructions on reverse side.**

1. Type of Well <input checked="" type="checkbox"/> Oil Well <input type="checkbox"/> Gas Well <input type="checkbox"/> Other		5. Lease Serial No. UTU-80907
2. Name of Operator Wolverine Gas and Oil Company of Utah, LLC		6. If Indian, Allottee or Tribe Name NA
3a. Address 55 Campau NW, Grand Rapids, MI 49503	3b. Phone No. (include area code) 616-458-1150	7. If Unit or CA/Agreement, Name and/or No. Wolverine Unit
4. Location of Well (Footage, Sec., T., R., M., or Survey Description) 2331' FNL, 549' FWL, Sec. 24, T20S, R1E, SLB&M		8. Well Name and No. Wolverine Federal Arapien Valley 24-1
		9. API Well No. 43-039-30030
		10. Field and Pool, or Exploratory Area Wildcat
		11. County or Parish, State Sanpete County, Utah

**12. CHECK APPROPRIATE BOX(ES) TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA**

TYPE OF SUBMISSION	TYPE OF ACTION			
<input type="checkbox"/> Notice of Intent	<input type="checkbox"/> Acidize	<input type="checkbox"/> Deepen	<input type="checkbox"/> Production (Start/Resume)	<input type="checkbox"/> Water Shut-Off
<input checked="" type="checkbox"/> Subsequent Report	<input type="checkbox"/> Alter Casing	<input type="checkbox"/> Fracture Treat	<input type="checkbox"/> Reclamation	<input type="checkbox"/> Well Integrity
<input type="checkbox"/> Final Abandonment Notice	<input type="checkbox"/> Casing Repair	<input type="checkbox"/> New Construction	<input type="checkbox"/> Recomplete	<input checked="" type="checkbox"/> Other Activity Update
	<input type="checkbox"/> Change Plans	<input type="checkbox"/> Plug and Abandon	<input type="checkbox"/> Temporarily Abandon	
	<input type="checkbox"/> Convert to Injection	<input type="checkbox"/> Plug Back	<input type="checkbox"/> Water Disposal	

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Please see the attached compilation of daily reports as an update of testing and completion activities at this exploratory well.

14. I hereby certify that the foregoing is true and correct Name (Printed/Typed) Ellis Peterson		Title Sr. Production Engineer
Signature <i>Ellis Peterson</i>		Date 06/27/2008

**THIS SPACE FOR FEDERAL OR STATE OFFICE USE**

Approved by <i>Accepted for Records Purpose</i>	Title	Date 7-29-08
Conditions of approval, if any, are attached. Approval of this notice does not warrant or certify that the applicant holds legal or equitable title to those rights in the subject lease which would entitle the applicant to conduct operations thereon.	Office	

Title 18 U.S.C. Section 1001 and Title 43 U.S.C. Section 1212, make it a crime for any person knowingly and willfully to make any statement or representation as to any matter within its jurisdiction.

(Instructions on page 2)

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UD08/04

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OCT 30 2008

DIV. OF OIL, GAS & MINING





# Wolverine Gas And Oil Company of Utah LLC

*Energy Exploration in Partnership with the Environment*

Providence Field Federal AV 24-1

SW/NW Section 24, T20S, R1E API # 43-039-30030

Sanpete Co Utah

6/20/2008 Flow tested well - 654 mcfpd, 109 bopd, 92 bwpd

Plan to continue flow testing.

6/21/2008 Flow tested well - 684 mcfpd, 119 bopd, 102 bwpd

Plan to continue flow testing.

6/22/2008 Flow tested well - 686 mcfpd, 105 bopd, 104 bwpd

Plan to continue flow testing.

6/23/2008 Flow tested well - 694 mcfpd, 114 bopd, 122 bwpd

Plan to pump ball job tomorrow

6/24/2008 Well continued to flow steady rates.

RU Halliburton pump equipment, held safety meeting pressure tested lines to 3200 psi, pressured csg to 2000 psi. RD lines & RU to tbg. Pressure tested lines to 7400 psi, pumped 500 gallons of breakdown fluid stepping the rate up to 5 bpm at a peak pressure of 2810 psi, then pumped 1000 gallons of breakdown fluid containing 120 buoyant balls followed by 1000 gallons of breakdown fluid containing 120 BioBalls, followed by 3716 gallons of break down fluid to displace balls to perms. Shut well in (ISIP 1000 psi) RD & released Halliburton pump equip.

Note: Peak pressure during ball action was 2675 psi.

RU swab equipment & swabbed well in, then turned over to flow testers.

Supervisor:

*Fernando Ortega*

Rig Operator:

UNITED STATES  
DEPARTMENT OF THE INTERIOR  
BUREAU OF LAND MANAGEMENT

FORM APPROVED  
OMB No. 1004-0137  
Expires: March 31, 2007

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1. Type of Well  
☒ Oil Well ☐ Gas Well ☐ Other

2. Name of Operator  
Wolverine Gas and Oil Company of Utah, LLC

3a. Address  
55 Campau NW, Grand Rapids, MI 49503

3b. Phone No. (include area code)  
616-458-1150

4. Location of Well (Footage, Sec., T., R., M., or Survey Description)  
2331' FNL, 549' FWL, Sec. 24, T20S, R1E, SLB&M

5. Lease Serial No.  
UTU-80907

6. If Indian, Allottee or Tribe Name  
NA

7. If Unit or CA/Agreement, Name and/or No.  
Wolverine Unit

8. Well Name and No.  
Wolverine Federal Arapien Valley 24-1

9. API Well No.  
43-039-30030

10. Field and Pool, or Exploratory Area  
Wildcat

11. County or Parish, State  
Sanpete County, Utah

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**CONFIDENTIAL**

14. I hereby certify that the foregoing is true and correct  
Name (Printed/Typed)

Ellis Peterson

Title Sr. Production Engineer

Signature

*Ellis Peterson*

Date

07/03/2008

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Approved by Accepted for Records Purpose

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Title

Date 7-29-08

Office

Title 18 U.S.C. Section 1001 and Title 43 U.S.C. Section 1212, make it a crime for any person knowingly and willfully to make to any department or agency of the United States any false, fictitious or fraudulent statements or representations as to any matter within its jurisdiction.

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OCT 30 2008

DIV. OF OIL, GAS & MINING

(Instructions on page 2)

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UDOGM



## Wolverine Gas And Oil Company of Utah LLC

*Energy Exploration in Partnership with the Environment*

Providence Field Federal AV 24-1

SW/NW Section 24, T20S, R1E API # 43-039-30030

Sanpete Co, Utah

6/25/2008 Flow tested well - 1241 mmcfpd, 166 bopd, 167 bwpd.

6/26/2008 Flow tested well - 1227 mmcfpd, 162 bopd, 159 bwpd.  
Plan to RU service unit to run final production equipment.

6/27/2008 MIRUSU, spot pump and run pump lines, shut down so Nabors well Service Tech can fix problem with computer on the rig.  
Plan to make repairs to rig, ND wellhead and NU BOP.

6/28/2008 Open tbq 1200 psi, bleed head off tbq & hook up and kill tbq w/ 40 bbls of completion fluid. ND wellhead NU BOP, rig floor and related equipment. SWIFN  
Plan to release PKR and POOH with tbq. RIH and retrieve plug.

6/29/2008 Opened well 300psi on tbq. Hook up and top kill tbq w/40 bbls. Pu on tbq release PKR. Lay down tbq hanger and reverse w/200bbls completion fluid. POOH w/tbq and BHA. PU and RIH w/ retrieving head and tbq.  
RIH to 9000' KB SWIFN  
Plan to release & pull plug. RIH w/production BHA

6/30/2008 Opened well 0 psi. Finish RIH w/retrieving head. Tag top of plug @ 9138' KB. PU and break circulation down csg, pump 25 bbls to fill well and circulate down to plug w/55 bbls. Circulate bottoms up, RIH and latch up plug and release POOH w/ plug. Lay down plug, PU and RIH w/ BHA as follows - 2 3/8" wireline entry guide - 1 joint 2 3/8" tbq - 2 3/8" xn w/ 1.870 ID - 2 3/8" 6' SUB - 2 3/8" x 2 7/8" xo- 5 1/2" arrowset 1 PKR (Nickel plated) - 1 joint 2 7/8" tbq - 2 7/8" x 2.225 SN - rest of tbq- 2 10' X 2 7/8" SUBS - TBG Hanger- set PKR w/20k compression  
Center element on PKR @ 9048' KB, EOT @ 9090' KB. Land tbq & fill w/ 18bbls, test to 1000 psi for 15 min.  
Bleed down csg. ND floor and BOP. NU Wellhead. SWIFN  
Plan to swab well in and rig down. RU slickline and run pressure gauges

7/1/2008 Open well up.0 psi tbq, RU to swab. Made 10 runs recovering 72 bbls IFL @ 1100' FFL @ 3000'  
Well kicked off flowing, RDMOSU  
Turned well over to production.  
Average production 529 Mcfpd, 104 bopd, 278 bwpd  
Plan to flow test well until the morning of July 4th then SI for bottom hole pressure build up.

7/2/2008 Flow tested well - 734 Mcfpd, 114 bopd, 198 bwpd.

Supervisor:

*Fernando Ortega*

**CONFIDENTIAL**

UNITED STATES  
DEPARTMENT OF THE INTERIOR  
BUREAU OF LAND MANAGEMENT

FORM APPROVED  
OMB No. 1004-0137  
Expires: March 31, 2007

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		9. API Well No. 43-039-30030
		10. Field and Pool, or Exploratory Area Wildcat
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Please see the attached compilation of daily reports as an update of testing and completion activities at this exploratory well.

14. I hereby certify that the foregoing is true and correct Name (Printed/Typed) Ellis Peterson		Title Sr. Production Engineer
Signature <i>Ellis Peterson</i>		Date 07/11/2008

**THIS SPACE FOR FEDERAL OR STATE OFFICE USE**

Approved by <u>ACCEPTED FOR RECORDS PURPOSE</u>	Title	Date <u>7-29-08</u>
Conditions of approval, if any, are attached. Approval of this notice does not warrant or certify that the applicant holds legal or equitable title to those rights in the subject lease which would entitle the applicant to conduct operations thereon.	Office	

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(Instructions on page 2)  
09PH00175  
U DCG:M

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OCT 30 2008

DIV. OF OIL, GAS & MINING



## Wolverine Gas And Oil Company of Utah LLC

*Energy Exploration in Partnership with the Environment*

Providence Field

Federal AV 24-1

SW/NW Section 24, T20S, R1E API # 43-039-30030

Sanpete Co, Utah

- 7/3/2008 Flow tested well - 792 Mcfpd, 110 bopd, 212 bwpd.
- 7/4/2008 Well SI for pressure build up
- 7/5/2008 Well SI for pressure build up
- 7/6/2008 Well SI for pressure build up
- 7/7/2008 Well SI for pressure build up
- 7/8/2008 Well SI for pressure build up
- Plan to pull pressure bombs & run static pressure gradient survey.
- 7/9/2008 SI tubing pressure 1180 psi. RU Tefteller wireline service, retrieved pressure bombs, round tripped a 1.750" gauge ring to 9100', run a static pressure gradient survey with stops every 1000' down to 6000', every 500' from 6500' to 8000', and at 8500', 8700', 8900', and 9080'. RU Fesco, RIH & took bottom hole oil samples. SWIFN
- Plan to recover subsurface water samples.
- 7/10/2008 Opened well, RIH & retrieved water sample from 5' off bridge plug, POOH with wireline & shut well in.
- Details of sampling & static pressure gradient surveys will be sent out when they are available.
- Plan to leave well SI until further notice.

Supervisor:

*Fernando Ortega*

UNITED STATES  
DEPARTMENT OF THE INTERIOR  
BUREAU OF LAND MANAGEMENT

FORM APPROVED  
OMB No. 1004-0137  
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3b. Phone No. (include area code)  
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4. Location of Well (Footage, Sec., T., R., M., or Survey Description)  
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5. Lease Serial No.  
**UTU-80907**

6. If Indian, Allottee or Tribe Name  
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7. If Unit or CA/Agreement, Name and/or No.  
**Wolverine Unit**

8. Well Name and No.  
**Wolverine Federal Arapien Valley 24-1**

9. API Well No.  
**43-039-30030**

10. Field and Pool, or Exploratory Area  
**Wildcat**

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	<input type="checkbox"/> Change Plans	<input type="checkbox"/> Plug and Abandon	<input type="checkbox"/> Temporarily Abandon	
	<input type="checkbox"/> Convert to Injection	<input type="checkbox"/> Plug Back	<input type="checkbox"/> Water Disposal	

13. Describe Proposed or Completed Operation (clearly state all pertinent details, including estimated starting date of any proposed work and approximate duration thereof. If the proposal is to deepen directionally or recompleat horizontally, give subsurface locations and measured and true vertical depths of all pertinent markers and zones. Attach the Bond under which the work will be performed or provide the Bond No. on file with BLM/BIA. Required subsequent reports shall be filed within 30 days following completion of the involved operations. If the operation results in a multiple completion or recompleat in a new interval, a Form 3160-4 shall be filed once testing has been completed. Final Abandonment Notices shall be filed only after all requirements, including reclamation, have been completed, and the operator has determined that the site is ready for final inspection.)

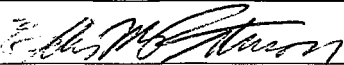
**There has been no activity on the subject well since the last report. The well is currently shut in until production logging service can be scheduled and the well will be returned to test for a few days prior to production logging. This is anticipated within the next couple of weeks. Weekly reports will be temporarily suspended until there is activity on the well.**

14. I hereby certify that the foregoing is true and correct  
Name (Printed/Typed)

**Ellis Peterson**

Title **Sr. Production Engineer**

Signature



Date

**07/18/2008**

**THIS SPACE FOR FEDERAL OR STATE OFFICE USE**

Approved by Accepted for Release Purpose

Title

Date **7-29-08**

Conditions of approval, if any, are attached. Approval of this notice does not warrant or certify that the applicant holds legal or equitable title to those rights in the subject lease which would entitle the applicant to conduct operations thereon.

Office

Title 18 U.S.C. Section 1001 and Title 43 U.S.C. Section 1212, make it a crime for any person knowingly and willfully to make to any department or agency of the United States any false, fictitious or fraudulent statements or representations as to any matter within its jurisdiction.

(Instructions on page 2)

**09 PH0018.S**  
**UDOGM**

**RECEIVED**

**OCT 30 2008**

**DIV OF OIL, GAS & MINING**

UNITED STATES  
DEPARTMENT OF THE INTERIOR  
BUREAU OF LAND MANAGEMENT

**SUNDRY NOTICES AND REPORTS ON WELLS**

*Do not use this form for proposals to drill or to re-enter an abandoned well. Use Form 3160-3 (APD) for such proposals.*

**SUBMIT IN TRIPLICATE- Other instructions on reverse side.**

1. Type of Well <input checked="" type="checkbox"/> Oil Well <input type="checkbox"/> Gas Well <input type="checkbox"/> Other		5. Lease Serial No. UTU-80907
2. Name of Operator Wolverine Gas and Oil Company of Utah, LLC		6. If Indian, Allottee or Tribe Name NA
3a. Address 55 Campau NW, Grand Rapids, MI 49503	3b. Phone No. (include area code) 616-458-1150	7. If Unit or CA/Agreement, Name and/or No. Wolverine Unit
4. Location of Well (Footage, Sec., T., R., M., or Survey Description) 2331' FNL, 549' FWL, Sec. 24, T20S, R1E, SLB&M		8. Well Name and No. Wolverine Federal Arapien Valley 24-1
		9. API Well No. 43-039-30030
		10. Field and Pool, or Exploratory Area Wildcat
		11. County or Parish, State Sanpete County, Utah

**12. CHECK APPROPRIATE BOX(ES) TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA**

TYPE OF SUBMISSION	TYPE OF ACTION			
<input type="checkbox"/> Notice of Intent	<input type="checkbox"/> Acidize	<input type="checkbox"/> Deepen	<input type="checkbox"/> Production (Start/Resume)	<input type="checkbox"/> Water Shut-Off
<input checked="" type="checkbox"/> Subsequent Report	<input type="checkbox"/> Alter Casing	<input type="checkbox"/> Fracture Treat	<input type="checkbox"/> Reclamation	<input type="checkbox"/> Well Integrity
<input type="checkbox"/> Final Abandonment Notice	<input type="checkbox"/> Casing Repair	<input type="checkbox"/> New Construction	<input type="checkbox"/> Recomplete	<input checked="" type="checkbox"/> Other Activity Update
	<input type="checkbox"/> Change Plans	<input type="checkbox"/> Plug and Abandon	<input type="checkbox"/> Temporarily Abandon	
	<input type="checkbox"/> Convert to Injection	<input type="checkbox"/> Plug Back	<input type="checkbox"/> Water Disposal	

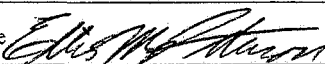
13. Describe Proposed or Completed Operation (clearly state all pertinent details, including estimated starting date of any proposed work and approximate duration thereof. If the proposal is to deepen directionally or recompleat horizontally, give subsurface locations and measured and true vertical depths of all pertinent markers and zones. Attach the Bond under which the work will be performed or provide the Bond No. on file with BLM/BIA. Required subsequent reports shall be filed within 30 days following completion of the involved operations. If the operation results in a multiple completion or recompleat in a new interval, a Form 3160-4 shall be filed once testing has been completed. Final Abandonment Notices shall be filed only after all requirements, including reclamation, have been completed, and the operator has determined that the site is ready for final inspection.)

Please see the attached compilation of daily reports as an update of testing and completion activities at this exploratory well.

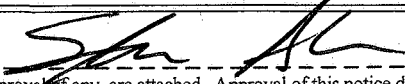
**RECEIVED**

**OCT 30 2008**

**DIV. OF OIL, GAS & MINING**

14. I hereby certify that the foregoing is true and correct Name (Printed/Typed) Ellis Peterson		Title Sr. Production Engineer
Signature 		Date 08/12/2008

**THIS SPACE FOR FEDERAL OR STATE OFFICE USE**

Approved by 	Title	Date 9-3-08
Conditions of approval, if any, are attached. Approval of this notice does not warrant or certify that the applicant holds legal or equitable title to those rights in the subject lease which would entitle the applicant to conduct operations thereon.		Office

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(Instructions on page 2)

09PH0019 S  
ADOGM

**Accepted For Record Purposes**



# Wolverine Gas And Oil Company of Utah LLC

*Energy Exploration in Partnership with the Environment*

Providence Field Federal AV 24-1

SW/NW Section 24, T20S, R1E API # 43-039-30030

Sanpete Co, Utah

7/11/2008 Well SI, no activity  
7/12/2008 Well SI, no activity  
7/13/2008 Well SI, no activity  
7/14/2008 Well SI, no activity  
7/15/2008 Well SI, no activity  
7/16/2008 Well SI, no activity  
7/17/2008 Well SI, no activity  
7/18/2008 Well SI, no activity  
7/19/2008 Well SI, no activity  
7/20/2008 Well SI, no activity  
7/21/2008 Well SI, no activity  
7/22/2008 Well SI, no activity  
7/23/2008 Well SI, no activity  
7/24/2008 Well SI, no activity  
7/25/2008 Well SI, no activity  
7/26/2008 Well SI, no activity  
7/27/2008 Well SI, no activity  
7/28/2008 Well SI, no activity  
7/29/2008 Well SI, no activity  
7/30/2008 Well SI, no activity  
7/31/2008 Well SI, no activity  
8/1/2008 Well SI, no activity  
8/2/2008 Well SI, no activity  
8/3/2008 Well SI, no activity  
8/4/2008 Opened well @ 10:00 AM (1200 psi tubing, 0 psi csg)  
Plan to produce well to stabilize flow rates for production log on Thursday the 7th.  
8/5/2008 Well produced 119 bbls oil, 108 bbls water & 429 mcf gas in 14 hours. FTP 260 psi  
8/6/2008 Well produced 135 bbls oil, 220 bbls water & 722 mcf gas in 24 hours. FTP 260 psi  
Plan to run production log around 11:00 AM tomorrow  
8/7/2008 Well produced 93 bbls oil, 279 bbls water & 675 mcf gas in 24 hours. FTP 260 psi  
RU Schlumberger wireline unit, PU Gamma / CCL equipment, RIH & tagged bottom at 9188' KB, POOH. PU production logging equipment, RIH & logged across production intervals from 9166'-9104', POOH & released wireline unit.  
See attached production logs - further production log analysis will be available the week of August 11th.  
Plan to continue flowing well to document water production.  
8/8/2008 Well production 128 bopd, 220 bwpd, 722 MCFPD  
8/9/2008 Well production 127 bopd, 199 bwpd, 744 MCFPD  
8/10/2008 Well production 127 bopd, 277 bwpd, 730 MCFPD  
8/11/2008 Well production 130 bopd, 293 bwpd, 740 MCFPD

Supervisor: *Tony E. Cook*



UNITED STATES  
DEPARTMENT OF THE INTERIOR  
BUREAU OF LAND MANAGEMENT

**SUNDRY NOTICES AND REPORTS ON WELLS**

*Do not use this form for proposals to drill or to re-enter an abandoned well. Use Form 3160-3 (APD) for such proposals.*

**SUBMIT IN TRIPLICATE- Other instructions on reverse side.**

1. Type of Well <input checked="" type="checkbox"/> Oil Well <input type="checkbox"/> Gas Well <input type="checkbox"/> Other		5. Lease Serial No. <b>UTU-80907</b>
2. Name of Operator <b>Wolverine Gas and Oil Company of Utah, LLC</b>		6. If Indian, Allottee or Tribe Name <b>NA</b>
3a. Address <b>55 Campau NW, Grand Rapids, MI 49503</b>	3b. Phone No. (include area code) <b>616-458-1150</b>	7. If Unit or CA/Agreement, Name and/or No. <b>Wolverine Unit</b>
4. Location of Well (Footage, Sec., T., R., M., or Survey Description) <b>2331' FNL, 549' FWL, Sec. 24, T20S, R1E, SLB&amp;M</b>		8. Well Name and No. <b>Wolverine Federal Arapien Valley 24-1</b>
		9. API Well No. <b>43-039-30030</b>
		10. Field and Pool, or Exploratory Area <b>Wildcat</b>
		11. County or Parish, State <b>Sanpete County, Utah</b>

**12. CHECK APPROPRIATE BOX(ES) TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA**

TYPE OF SUBMISSION	TYPE OF ACTION			
<input type="checkbox"/> Notice of Intent	<input type="checkbox"/> Acidize	<input type="checkbox"/> Deepen	<input type="checkbox"/> Production (Start/Resume)	<input type="checkbox"/> Water Shut-Off
<input checked="" type="checkbox"/> Subsequent Report	<input type="checkbox"/> Alter Casing	<input type="checkbox"/> Fracture Treat	<input type="checkbox"/> Reclamation	<input type="checkbox"/> Well Integrity
<input type="checkbox"/> Final Abandonment Notice	<input type="checkbox"/> Casing Repair	<input type="checkbox"/> New Construction	<input type="checkbox"/> Recomplete	<input checked="" type="checkbox"/> Other <b>Activity Update</b>
	<input type="checkbox"/> Change Plans	<input type="checkbox"/> Plug and Abandon	<input type="checkbox"/> Temporarily Abandon	
	<input type="checkbox"/> Convert to Injection	<input type="checkbox"/> Plug Back	<input type="checkbox"/> Water Disposal	

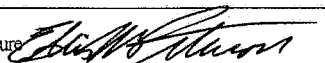
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Please see the attached compilation of daily reports as an update of testing and completion activities at the Arapien Valley 24-1 exploratory well. This well is currently shut in and activities on the well are suspended for a few weeks while waiting for a completion rig. When activities resume, it is planned to cement squeeze the existing Navajo1 perforations at 9104' - 9166' using 100 sacks of premium cement. Another Navajo1 interval at 8942' - 8948' will then be perforated and flow tested as detailed in the attached procedure.

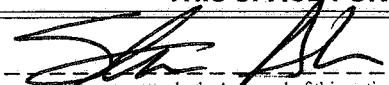
**RECEIVED**

**OCT 30 2008**

**DIV. OF OIL, GAS & MINING**

14. I hereby certify that the foregoing is true and correct Name (Printed/Typed) <b>Ellis Peterson</b>		Title <b>Sr. Production Engineer</b>
Signature 		Date <b>08/20/2008</b>

**THIS SPACE FOR FEDERAL OR STATE OFFICE USE**

Approved by 	Title <b>SNRS</b>	Date <b>9-3-08</b>
Conditions of approval, if any, are attached. Approval of this notice does not warrant or certify that the applicant holds legal or equitable title to those rights in the subject lease which would entitle the applicant to conduct operations thereon.	Office <b>RFO</b>	

Title 18 U.S.C. Section 1001 and Title 43 U.S.C. Section 1212, make it a crime for any person knowingly and willfully to make to any department or agency of the United States any false, fictitious or fraudulent statements or representations as to any matter within its jurisdiction.

(Instructions on page 2)

09PH00208  
LDOGM

**Accepted For Record Purposes**



# Wolverine Gas And Oil Company of Utah LLC

*Energy Exploration in Partnership with the Environment*

Providence Field

Federal AV 24-1

SW/NW Section 24, T20S, R1E API # 43-039-30030

Sanpete Co, Utah

8/12/2008 Well production 151 bopd, 232 bwpd, 735 MCFPD  
8/13/2008 Well production 120 bopd, 217 bwpd, 740 MCFPD  
8/14/2008 Well production 128 bopd, 217 bwpd, 740 MCFPD  
8/15/2008 Well production 63 bo, 118 bw, 735 MCF in 14 hrs. Shut well in at 2:00 PM. Well will remain SI until completion rig moves back on for further evaluations.  
8/16/2008 No activity  
8/17/2008 No activity  
8/18/2008 No activity  
8/19/2008 No activity

Supervisor:

*Tony E. Cook*

## Tight Hole

### **Wolverine Gas & Oil Company of Utah, LLC Completion Procedure**

#### **Arapien Valley 24-1 Providence Field**

Purpose: Plug back existing Navajo1 perforations and then complete and test additional Navajo1 interval.

#### PERTINENT INFORMATION

Location: 2331' FNL, 549' FWL (SW-NW)  
Section 24, Township 20 South, Range 1 East  
Sanpete County, Utah

Elevation: 5554' GL, 5580' KB

TD: 13,050'

PBTD: 9188' (cement on top of CICR @ 9205')

API No.: 43-039-30030

Casing: 13-3/8", 68.0# @ 2017', cemented to surface  
9-5/8", 47.0# HCL-80 and 53# HCP-110, LT&C @ 10,373', foam cemented with  
returns to surface  
5-1/2", 20.0#, P-110, LT&C @ 12,755', stage tool at 9950', cemented with 735 sks  
50:50 Poz (Stage 1) and 1635 sks of Class G (Stage 2)

Wellhead: Tubing Head Flange – 7-1/16" 10k w/ 2-7/8" EUE top connection

Tubing: 2-7/8", 6.5#, L-80, EUE, 8rd (new)

Production Casing Specs: 5-1/2", 20.0#, P-110, LT&C, 8rd, ID: 4.778" Drift: 4.653"  
Collapse: 11,080 psi Burst: 12,640 psi (80% 10,112 psi)

Tubing Specs: 2-7/8", 6.5#, L-80, EUE, 8rd, ID: 2.441" Drift: 2.347"  
Collapse: 11,170 psi Burst: 10,570 psi (80% 8456 psi)  
Joint: 145,000 lbs (80% 116,000 lbs)

Capacities: 5-1/2", 20.0#: 0.0221 Bbls/ft, 0.1245 ft<sup>3</sup>/ft  
2-7/8", 6.5#: 0.00579 Bbls/ft, 0.0325 ft<sup>3</sup>/ft  
5-1/2" x 2-7/8" Annulus: 0.0141 Bbls/ft, 0.0794 ft<sup>3</sup>/ft

BH Temperature: 200°F @ 9000'

#### Existing Navajo2 Perforations:

12,373'- 12,380' MD (12,370'- 12,377' TVD), 7', 42 holes (below CIBP @ 12,369')  
12,290'- 12,316' MD (12,287'- 12,313' TVD), 26', 156 holes (below CIBP @ 12,280')

All depths are referenced to Schlumberger Platform Express CN-TDL-GR log dated 2/21/2008.

**Existing Navajo1 Perforations:**

9217'- 9222' MD (9216'- 9221' TVD), 5', 30 holes (below CICR @ 9205')  
9160'- 9166' MD (9159'- 9165' TVD), 6', 36 holes  
9145'- 9154' MD (9144'- 9153' TVD), 9', 54 holes  
9104'- 9131' MD (9103'- 9130' TVD), 27', 162 holes

**Proposed Navajo1 Perforations:**

8942'- 8948' MD (8941'- 8947' TVD), 6', 36 holes

All depths are referenced to Schlumberger Platform Express CN-TDL-GR log dated 1/17/2008.  
CBL dated 4/12/2008 is 2' shallow to open-hole logs at Navajo1 depth.

Note: Poisonous Hydrogen Sulfide (H<sub>2</sub>S) gas is present in the Navajo1 Formation so appropriate safety procedures should be followed.

**PROCEDURE**

1. Fill a 500-Bbl frac tank with completion fluid (CF) consisting of filtered 4% KCl water, 21 gallons (1000 ppm) Baker Petrolite WAW 3003 non-ionic surfactant, 5.25 gallons (250 ppm) XC102W biocide, and 1.25 gallons (60 ppm) OSW5200 Oxygen Scavenger.
2. MIRU completion unit. Kill well with completion fluid. ND wellhead and NU BOP.
3. Release Arrowset-1 packer set at 9048' and circulate 230+ Bbls. POOH with tubing and packer assembly.
4. RIH with a CICR on tubing and set it at 9090''. RU cementing company to squeeze perforations at 9104' - 9166' using 100 sacks of premium cement containing additives per selected service company recommendation to allow 4 hours of pump time with the BHP of 200 °F. Hesitation squeeze to a maximum pressure of 3000 psi then pull up to leave at least 0.5 Bbls of cement on top of CICR. Pull up to 9080' and reverse circulate tubing clean.
5. POOH to 4000'. RU and swab fluid level in well down to 2500'. RD swab and finish POOH with tubing and stinger.
6. RU wireline with lubricator and perforate at 8942' - 8948' (8938' - 8944' on 4/12/2008 CBL depths) with 0.40+'' diameter holes using 4'' hollow expendable carriers loaded 6 SPF on 60° phasing with 25 gram charges. RD and release wireline service.
7. Fill hole with completion fluid. RIH with a wireline re-entry guide, one joint of 2-3/8'' tubing, 2-3/8'' x 1.870'' XN profile landing nipple, 6' 2-3/8'' tubing sub, 5.5'' x 2-7/8'' nickel coated Arrowset 1-X retrievable packer, one joint of 2-7/8'' tubing, 2-7/8'' x 2.25'' seating nipple, and 2-7/8'' tubing to surface. Space out, set packer at 8870', and land tubing in hanger with 20,000 lbs compression.
8. Pressure test 2-7/8'' x 5-1/2'' annulus to 2500 psi using rig pump. ND BOP and NU wellhead (include a swab valve).
9. RU to break down and ball off the isolated perforation interval using 1000 gallons of 4% KCl completion fluid mixed with 5 gallons of Halliburton GasPerm 1000 and 70 mixed ball sealers (half BioBalls and half buoyant balls). Hold safety meeting and pump treatment as follows, then RD and release Halliburton.

Fluids and Additives:

Breakdown Fluid: 1000 gallons completion fluid with an added 4 gallons of GasPerm 1000.

Diverter: 70 Diverter Balls including 35 BioBalls MR (7/8", green) and 35 7/8" 0.90 S.G. balls.

Corrosion Inhibitor: 15 gallons of Baker Petrolite CRO195 mixed in 2 Bbls of CF

Displacement Fluid: 58 Barrels CF

Maximum Injection Pressure: 5000 psi

Injection Rate: 2-4 BPM

Pump Schedule:

- A. Pressure test surface lines to 5500+ psi.
  - B. Pressure up and trap ~2000 psi on casing.
  - C. Pump 300 gallons (7.1 Bbls) of Breakdown Fluid (with no balls) at a rate of rate of 2-4 BPM and 3000 - 5000 psi.
  - D. Pump 350 gallons (8.3 Bbls) of Breakdown Fluid containing 35 buoyant balls (one per 10 gallons) at a rate of a rate of rate of 2-4 BPM and 3000 - 5000 psi.
  - E. Pump 350 gallons (8.3 Bbls) of Breakdown Fluid containing 35 BioBalls (one per 10 gallons) at a rate of a rate of rate of 2-4 BPM and 3000 - 5000 psi.
  - F. Pump 2 Bbls of corrosion inhibitor fluid.
  - G. Pump 2436 gallons (58 Bbls) of displacement fluid to displace Breakdown Fluid and balls at a rate of 2-4 BPM and 3000 - 5000 psi.
  - H. Shut well in and record ISIP.
- 10. RU and swab well in.
  - 11. Swab to initiate flow and turn flowing well to temporary production. RDMOSU.
  - 12. After load fluid is recovered, adjust choke to establish a stabilized flow rate with a minimum FTP of 200 psi. Record production and flowing conditions on a daily basis.

Note: Duration of production period will be just long enough to establish and meter stabilized flow, collect production samples, and possibly conduct a pressure build-up test.

RECEIVED

CONFIDENTIAL

Form 3160-5  
(April 2004)UNITED STATES  
DEPARTMENT OF THE INTERIOR  
BUREAU OF LAND MANAGEMENT

OCT 15 2008

FORM APPROVED  
OMB No. 1004-0137  
Expires: March 31, 2007

Richfield BLM Field Office

## SUNDRY NOTICES AND REPORTS ON WELLS

Do not use this form for proposals to drill or to re-enter an abandoned well. Use Form 3160-3 (APD) for such proposals.

**SUBMIT IN TRIPLICATE- Other instructions on reverse side.**

## 1. Type of Well

☒ Oil Well ☐ Gas Well ☐ Other

## 2. Name of Operator

Wolverine Gas and Oil Company of Utah, LLC

## 3a. Address

55 Campau NW, Grand Rapids, MI 49503

## 3b. Phone No. (include area code)

616-458-1150

## 4. Location of Well (Footage, Sec., T., R., M., or Survey Description)

2331' FNL, 549' FWL, Sec. 24, T20S, R1E, SLB&amp;M

## 5. Case Serial No.

010-80907

## 6. If Indian, Allottee or Tribe Name

NA

## 7. If Unit or CA/Agreement, Name and/or No.

Wolverine Unit

## 8. Well Name and No.

Wolverine Federal Arapien Valley 24-1

## 9. API Well No.

43-039-30030

## 10. Field and Pool, or Exploratory Area

Wildcat

## 11. County or Parish, State

Sanpete County, Utah

## 12. CHECK APPROPRIATE BOX(ES) TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA

TYPE OF SUBMISSION	TYPE OF ACTION			
<input type="checkbox"/> Notice of Intent	<input type="checkbox"/> Acidize	<input type="checkbox"/> Deepen	<input type="checkbox"/> Production (Start/Resume)	<input type="checkbox"/> Water Shut-Off
<input checked="" type="checkbox"/> Subsequent Report	<input type="checkbox"/> Alter Casing	<input type="checkbox"/> Fracture Treat	<input type="checkbox"/> Reclamation	<input type="checkbox"/> Well Integrity
<input type="checkbox"/> Final Abandonment Notice	<input type="checkbox"/> Casing Repair	<input type="checkbox"/> New Construction	<input type="checkbox"/> Recomplete	<input checked="" type="checkbox"/> Other Activity Update
	<input type="checkbox"/> Change Plans	<input type="checkbox"/> Plug and Abandon	<input type="checkbox"/> Temporarily Abandon	
	<input type="checkbox"/> Convert to Injection	<input type="checkbox"/> Plug Back	<input type="checkbox"/> Water Disposal	

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Please see the attached compilation of daily reports as an update of testing and completion activities at the Arapien Valley 24-1 exploratory well. Perforations at 9104' - 9166' were squeezed with 100 sacks of 50:50 poz cement. Perforations at 8942' - 8948' were opened, flow tested for three days, and squeezed with 50 sacks of 50:50 poz cement. It is planned to continue testing select Navajo1 intervals from 8854' to 8922'.

14. I hereby certify that the foregoing is true and correct  
Name (Printed/Typed)

Ellis Peterson

Title Sr. Production Engineer

Signature

Date

10/13/2008

## THIS SPACE FOR FEDERAL OR STATE OFFICE USE

Approved by

**Noted To Record**

Title

Date 10/27/08

Conditions of approval, if any, are attached. Approval of this notice does not warrant or certify that the applicant holds legal or equitable title to those rights in the subject lease which would entitle the applicant to conduct operations thereon.

Office

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NOV 03 2008

(Instructions on page 2)

4 D O G M

09PH00075

DIV. OF OIL, GAS &amp; MINING

# RECEIVED

OCT 15 2008



## Wolverine Gas And Oil Company of Utah LLC

*Energy Exploration in Partnership with the Environment*

### Richfield BLM Field Office

Providence Field

Federal AV 24-1

SW/NW Section 24, T20S, R1E API # 43-039-30030

Sanpete Co, Utah

8/16 thru 9/25 No activity

9/26/2008 Road rig to location, spot and set catwalk.

9/27/2008 Spot rig, continue hooking up pump and lines.

9/28/2008 Rig crew on days off

9/29/2008 Rig crew on days off

9/30/2008 Rig crew on days off

10/1/2008 Rig crew on days off

10/2/2008 Finish hooking up pump and lines, unload BOP.

10/3/2008 Opened well, 1100 psi tbg, blew well down, RU pump lines, killed well with CF, ND wellhead and NU BOP. Released Arrowset-1 pkr & POOH with tbg, leaving 1000' of kill string in hole. SWIFN.

10/4/2008 Opened well, 0 psi tbg, finished POOH with tbg and pkr, PU and RIH with tubing set CICR and set at 9093' Pressure tested tbg to 2000 psi, pressure tested casing to 1000 psi, unsting from CICR then sting back into CICR. SWIFN, Plan to squeeze perf intervals 9104' - 9166' tomorrow.

10/5/2008 RU Halliburton pump equipment, held safety meeting pressure tested lines to 3100 psi, filled tubing and established an injection rate of 1.7 bpm @ 1120 psi, SD, unsting from CICR, pumped 22.6 bbls of 50:50 poz cement with latex followed by 29 bbls of fresh water, sting into CICR, pumped 15.5 bbls of displacement fluid at 1.3 bpm, SD, waited for pressure to stabilize at 206 psi, pumped .3 bbls - waited for pressure to stabilize at 1182 psi, pumped .2 bbls - waited for pressure to stabilize at 1296 psi, pumped .2 bbls - waited for pressure to stabilize at 1674 psi, pumped .1 bbls - pressure was slowly dropping at 1960 psi. Released pressure, unsting from CICR and reverse circulated 80 bbls of CF. Note: Had approximately 4 bbls of cement returns. Cement data - (Corrosacem system 452967) 100 sx 14.5# Latex Cement

- Density: 14.5 lb/gal
- Yield: 1.21 ft<sup>3</sup>/sk
- Water: 2.85 gal/sk
- Thickening Time: 4hrs
- Free Water: none
- Fluid Loss: 14 cc/30-min (API)

10/6/2008 Opened well, finished POOH with tbg and stinger, RIH with TCP assembly, loaded tubing with 15 gallons of CRO 195 followed by 22 bbls of CF (filled tbg to 4900'), RU wireline unit and correlated to Schlumberger Platform Express log dated 1/17/08, POOH with GR-CCL, set pkr in 20,000# compression, RIH with GR-CCL to confirm depths, RD and released wireline unit ND BOP, NU wellhead, dropped bar and perforated well at 8942'- 8948' with 3 SPF. SWIFN Plan to flow well back for cleanup and flow rates.

10/7/2008 Opened well, 600 psi tbg psi, well flowed back 5 bbls oil, 12 bbls water, gas flow rate dropped off to 275 MCFPD, shut well in for 2 hrs, tubing pressure built to 500 psi. Opened well to frac tank and flowed back 2 bbls of oil in 45 minutes, RU swab equipment, made 4 swab runs recovering 10 bbls oil and 1 bbl of water, initially tagged fluid at 6500 ft, pulled from 8000' on last run. Opened well to T-pak and let flow overnight, flow rates of 250 MCFPD, 27 bopd.

10/8/2008 Well is flowing a rate of 27 bbls oil, 0 bbls water, 292 MCF in 24 hrs. 48/64 choke, 110 psi tubing, 70 psi separator pressure. Well has shown signs of liquid loading throughout the day. Plan to install plunger lift tomorrow.

10/9/2008 Well still flowing a rate of 27 bopd, 0 bwpd and 292 MCF of gas per day. Shut well in at 8:00 AM to install plunger lift system. Opened well at 11:00 am with 820 psi tubing pressure, well flowed back 8.3 bbls oil and 0 bbls water. Started plunger lift system at 12:00 pm. (traveling plunger - no shut in time).

Plan to let well flow overnight with plunger system, then POOH with tbg and RIH with wireline set CICR.

10/10/2008 Well produced a rate of 40 bopd, 0 bwpd and 354 MCF per day with steady rates overnight on a 48/64 choke, 110 psi tubing, 70 psi separator pressure. RU pump lines, killed well with 50 bbls CF, released pkr, POOH with TCP assembly, RU wireline unit and set 5 1/2" (20#) CICR at 8936', RD and released wireline unit.

10/11/2008 Opened well. Finish RIH w/ stinger for CICR. EOT @ 8032' KB. Halliburton got delayed due to weather.

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OCT 15 2008

## Richfield BLM Field Office

SWIFN.

Plan to pump squeeze in AM

10/12/2008

Opened well. Finish RIH w/stinger and tag CICR @ 8936'KB . RU Halliburton

to squeeze perms at 8942'- 8948'. Held safety meeting and tested surface lines to 2500psi. Sting into CICR.

Establish injection rate of 1.8 bpm @ 1900 psi with 8 total bbls pumped. Sting out of CICR, mixed and pumped 10.6 Bbls of 50:50 poz cement with latex, displaced cement with 39.1 Bbls of fresh water, and sting back into retainer.

Pumped 7.5 Bbls of displacement (5.5 Bbls out of tubing). Hesitation squeezed to 2000 psi.

Sting out, pulled up 2', and reverse circulated the well clean. RD and released Halliburton.

Pull tbg up to 4400'KB and rig up to swab . Swab well down to 2500' .SWIFN.

Cement data - (Corrosacem system 452967) 100 sx 14.5# Latex Cement

- Density: 14.5 lb/gal
- Yield: 1.19 ft<sup>3</sup>/sk
- Water: 3.6 gal/sk

Plan to finish POOH w/ stinger and tbg, and then perforate at 8920' - 8922' and 8904' - 8914'.

Supervisor:

*Tony E. Cook*



**H2S Contingency Plan**

For Workover/Completion

***Wolverine***

***Wolverine Federal Arapien Valley 24-1***

Section 24  
Township 20S - Range 01E  
Sanpete Co, Utah

GL Elevation 5554 ft

**Wolverine  
One Riverfront Plaza  
55 Campau, NW  
Grand Rapids, Michigan 49503-2616**

**RECEIVED**  
**NOV 03 2008**  
**DIV. OF OIL, GAS & MINING**

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## Introduction

It is the policy of WOLVERINE GAS AND OIL COMPANY OF UTAH, LLC (Wolverine) to provide a safe and healthful work environment for all of its employees as well as contractors that may work on Wolverine leases. Wolverine makes a continued effort to comply with laws and regulations related to worker safety and health, and to manage all operations in a manner to reduce risk.

The following is a H<sub>2</sub>S contingency plan for the Wolverine Federal Arapien Valley 24-1 (AV 24-1) well. It is designed for personnel working on this project to follow in case of an accidental release of hydrogen sulfide during completion or workover operations. For the plan to be effective, all personnel must review and be familiar with onsite duties as well as the safety equipment involved.

The purpose of this plan is to act as a guideline for personnel working on the wellsite in the event of a sudden release of hydrogen sulfide. All personnel working on the wellsite as well as service personnel that may travel to location on an unscheduled basis must be familiar with this program. The cooperation and participation of all personnel involved with the completion/workover operation is necessary for this plan to be effective.

Directions to location:

From the town of Mayfield in Sanpete County, go approximately 4 miles south on county road, then turn southwesterly for 2 miles on lease road to location.

## **I. Duties & Responsibilities**

In order to assure proper execution of the contingency plan, it is essential that one person be responsible for and in complete charge of implementing the procedures outlined in this plan. The order of responsibility will be as follows:

1. Wolverine supervisor on location - if unable to perform his/ her duties;
2. Alternate Wolverine representative - if unable to perform his/ her duties;
3. Rig Supervisor/Toolpusher - if unable to perform his/her duties;
4. Safety consultant representative - if available.

### **A. All Personnel**

1. Always be alert for possible H2S alarms - both audible and visual.
2. Be familiar with location of Safe Briefing Areas (SBA) and protective breathing equipment.
3. Develop "wind awareness". Be aware of prevailing wind direction as well as nearby uphill areas should there be no wind.
4. Familiarize yourself with nearest escape routes for safe evacuation.
5. Should H2S alarm sound, DON'T PANIC - remain calm and follow instructions of person in charge.
6. If the H2S alarms sound:
  - a. Essential personnel shall don the appropriate respiratory protective equipment and follow safety procedures. They will continue to wear respiratory protective equipment until the area is deemed safe (H2S concentration less than 10 PPM).
  - b. Non-essential personnel shall evacuate to the appropriate safe briefing area using escape-breathing systems. They are to wait there for further instructions from the Wolverine foreman or the designated person in charge.
  - c. Initiate rescue protocol if necessary and following training procedures.

## **B. Wellsite Supervisor**

1. The Wellsite Supervisor will confirm that all personnel on location at any time are trained in H2S safety and aware of above list of duties.
2. The Wellsite Supervisor will ensure that all personnel observe all safety and emergency procedures.
3. The Wellsite Supervisor will make an effort to keep the number of personnel on location to a minimum and to ensure that only essential personnel are on location during critical operations.
4. Should an extreme danger condition exist, the Wellsite Supervisor will:
  - a. Assess the situation and advise all personnel by appropriate means of communication.
  - b. Be responsible for determining that the extreme danger condition is warranted and have the red flag posted at location entrance.
  - c. Go to safe briefing area. Give clear instructions relative to hazard on location and actions for personnel to follow.
  - d. Notify company and regulatory groups of current situation as required per company policy and regulatory protocol. Follow appropriate procedures for emergency services notification.
  - e. Proceed to well and supervise operations with rig supervisor. Take action to control and reduce the H2S hazard.
  - f. Ensure that essential personnel are properly protected with supplied air breathing equipment and that non-essential personnel are in a "poison gas free" area.
  - g. Authorize evacuation of any persons/residents in area surrounding the well location.
  - h. Commence any ignition procedures if ignition criteria are met.

### **C. Rig Supervisor/Toolpusher**

1. If the Wellsite Supervisor is unable to perform his/her duties and an alternate Wolverine representative is also unable or unavailable to perform his/her duties, the rig supervisor will assume command of wellsite operations and all responsibilities listed above for Wellsite Supervisor.
2. The Rig Supervisor will ensure that all rig personnel are properly trained to work in H2S environment, fully understand the purpose of H2S alarms, and know actions to take when alarms activate. He/She will ensure that all crew personnel understand the buddy system, safe briefing areas, and individual duties as well as emergency evacuation procedures.
3. Should any extreme danger operational condition arise, the Rig Supervisor shall assist the Wellsite Supervisor by:
  - a. Proceeding to the rig floor and assist in supervising rig operations.
  - b. Ensuring that only essential working personnel remain in hazardous areas.
  - c. Ensuring that all crewmembers that remain in hazardous area, wear respiratory protective equipment until notified that area is "clear" of any toxic gases.
  - d. Assigning rig crewmember or other service representative to block entrance to location. No unauthorized personnel are to be allowed entry to location.
  - e. Helping to determine hazardous "danger zones" on location using portable detection equipment, and positioning electric fans to move gas in any high concentration areas.

#### **D. Safety Consultant (if present)**

1. During normal operations (no H<sub>2</sub>S present), the safety consultant will be responsible for the following:
  - a. Ensuring that all wellsite safety equipment is in place and operational.
  - b. Ensuring that all wellsite personnel are familiar with location safety layout and operation of all safety equipment.
  - c. Assisting the Wellsite Supervisor in performing weekly H<sub>2</sub>S drills for location personnel.
2. When an operational condition is classified as extreme danger, the safety consultant will be responsible for the following:
  - a. Accounting for all wellsite personnel.
  - b. Assessing any injuries and directing first aid measures.
  - c. Ensuring that all safety and monitoring equipment are functioning properly and available.
  - d. Monitoring the safety of wellsite personnel.
  - e. Maintaining close communication with the Wellsite Supervisor.
  - f. Being prepared to assist Wellsite Supervisor with support for rig crew or other personnel using breathing equipment.
  - g. Being prepared to assist the Wellsite Supervisor with emergency procedures including possible well ignition.
  - h. Being prepared to assist with evacuation of any area residents or other personnel in the immediate area.

#### **E. Operations Foreman**

1. The Wolverine Operations Foreman will be responsible for notifying and maintaining contact with the company Production Manager and/or other company supervisory personnel as required.
2. Maintaining communication with the Wellsite Supervisor and providing any other assistance that might be required.
3. Travelling to wellsite if appropriate
4. Assisting Wellsite Supervisor with all other notifications – including both company and regulatory.

## **II. Well Location Layout**

### **A. Location**

1. All respiratory protective equipment and H<sub>2</sub>S detection equipment will be in place and functioning prior to any well intervention activities if the well is or will be completed in a formation that potentially contains H<sub>2</sub>S. All formations completed in the AV 24-1 should be considered to contain H<sub>2</sub>S until adequately tested to determine otherwise. The Navajo<sub>2</sub> Formation located at a depth of 12,121 feet is known to contain H<sub>2</sub>S.
2. The workover/completion rig will be situated on location so the prevailing winds do not blow across the rig toward the circulation pump and tanks or toward the BOP controls, or as near this configuration as possible.
3. The entrance to the location is designed so that it can be barricaded if a hydrogen sulfide emergency condition arises. An auxiliary exit route will be available so that in case of an emergency, a shift in wind direction would not prevent escape from the location.
4. A minimum of two safe briefing areas (SBA) shall be designated for assembly of personnel during emergency conditions. These SBA will be located at least 150 feet from the wellbore and such that at least one area will be upwind of the well at all times. Upon recognition of an emergency situation, all personnel will be trained to assemble at the designated briefing area for instructions.
5. Smoking areas will be established and "No Smoking" signs will be posted around the location.
6. Reliable 24 hour telephone communications will be available on location.
8. All equipment that might come in to contact with hydrogen sulfide (tubing, packers, down-hole tools, casing, wellhead, blowout preventers, and surface production equipment) will meet metallurgy requirements for H<sub>2</sub>S service.
9. A continuous electronic H<sub>2</sub>S detection system that automatically activates visible and audible alarms if hydrogen sulfide is detected will be in place at the well servicing rig. The visible light will activate if 10 ppm H<sub>2</sub>S is present. The audible siren will activate if 15 ppm H<sub>2</sub>S or higher concentration is present. There will be at least 3 H<sub>2</sub>S sensors in place on the rig. They will be located to detect the presence of hydrogen sulfide in areas where it is most likely to come to surface. The sensor head locations will be: 1) at the rig operator platform 2) at BOP stack, wellhead, or in well cellar, 3) at circulating pump. Additional sensors will be positioned at the discretion of the wellsite supervisor. At least 1 light and 1 siren will be placed near the rig to indicate the



presence of hydrogen sulfide. The light and siren will be strategically placed to be visible to all personnel on the well site. Additional alarm lights and sirens may be added to ensure that all personnel on the well site are able to notice the alarms at any time.

10. The H<sub>2</sub>S detection equipment will be calibrated as recommended by the manufacturer. Calibration records will be maintained on location.
11. A least 2 such wind direction indicators (i.e., windsocks, wind vanes, pennants with tail streamers, etc.) will be located at separate elevations to ensure visibility to all principal working areas at all times. In addition, a wind direction indicator will be present at each of the 2 briefing areas if the other wind direction indicators are not visible from the safe briefing areas.
12. All respiratory protective equipment will be NIOSH/MSHA approved positive pressure type and maintained according to manufacturer's guidelines. All breathing air used for this equipment will be CGA type Grade D breathing air.
13. Both 30-minute self-contained breathing apparatuses (SCBA) and workline units with escape cylinders will be available on location. There will be sufficient numbers of this supplied air breathing equipment on location to ensure that all personnel on location have a piece of equipment available to each of them. All respiratory protective equipment will use nose cups to prevent fogging in temperatures below 32 °F. Spectacle kits will be available for personnel that require corrective lenses when working under mask.
14. Electric explosion-proof ventilating fans (bug blowers) will be available to provide air movement in enclosed areas where gas might accumulate.
15. H<sub>2</sub>S drills will be conducted at least weekly to ensure that all well site personnel are competent in emergency donning procedures. These drills will be recorded in the rig book as well as in the safety trailer logbook.
16. Electronic voice-mikes or other means of communicating will be available for essential personnel to use when working under mask.
17. Additional breathing equipment will be provided for non-routine operations that require additional service personnel on the well location to ensure that all personnel on the well location have a dedicated supplied air respirator.
18. Location access will be monitored and controlled during "non-routine" operations such as perforating, pressurized pumping, and well testing. The number of personnel on location will be restricted to "essential" personnel only.

### **III. Safety Procedures**

#### **A. Training**

All personnel who come onto the location must be properly trained in hydrogen sulfide, nitrogen, and oxygen deficient atmospheres safety. The personnel shall carry documentation with them indicating that the training has occurred within the previous 12 months. All training will comply with federal and state regulatory guidelines.

Training topics shall include at a minimum:

1. Hazards and characteristics of hydrogen sulfide, nitrogen, and oxygen deficient atmospheres and symptoms of exposure to these gases.
2. Proper use, care and limitations of respiratory protective equipment with hands-on practice.
3. Use of both fixed and portable toxic gas detection equipment.
4. Work practices to reduce chances for toxic gas exposure and procedures for confined space.
5. First aid for toxic gas exposure and resuscitation equipment.
6. The buddy system.
7. Emergency evacuation procedures.
8. A review of the contingency plan for the well.

#### **B. Operating Conditions**

A three color-flag warning system will be used to notify personnel approaching the drill site as to operating conditions on the wellsite. This system is in compliance with BLM Onshore Order 6 and follows industry standards.

Green Flag - Potential Danger

Yellow Flag - Moderate Danger

Red Flag- Extreme Danger - Do not approach if red flag is flying.

### **C. Evacuation Plan**

There are no permanent residents within a 1-mile radius of the drill site. The prevailing wind is from the southwest. Wolverine will conduct any evacuation in coordination with their Operations Center and with the direction of their Wellsite Supervisor.

All regulatory agencies will be notified as soon as possible.

### **D. Emergency Rescue Procedures**

Well site personnel should not attempt emergency rescues unless they have been properly trained. A trained person who discovers another person overcome by hydrogen sulfide **should not attempt to rescue without donning the proper breathing equipment.** When making an emergency rescue always use the following procedures:

1. Don rescue breathing equipment before attempting to rescue someone.
2. Remove the victim from the contaminated area to an area free of toxic gas by traveling upwind or cross wind. Be certain that you are in a safe area before removing your breathing equipment.
3. If the victim is not breathing, initiate mouth-to-mouth resuscitation immediately. Follow CPR guidelines and replace mouth-to-mouth with a bag mask resuscitator if available.
4. Treat the victim for shock, keeping the victim warm and calm. Never leave the victim alone.
5. Any personnel who experience hydrogen sulfide exposure must be taken to a hospital for examination and their supervisor notified of the incident.
6. Their supervisor shall follow the company Emergency Preparedness plan.

#### **IV. H2S Safety Equipment on Well Location**

<b>Item</b>	<b>Amount</b>	<b>Description</b>
1.	One (1)	Safety trailer with a cascade system of 4-300 cu. ft. bottles of compressed breathing air complete with high-pressure regulators.
2.	400 ft.	Low-pressure airline equipped with locking fittings. This airline will be rigged up with manifold to supply breathing air to the rig floor, derrick, and pumping areas. High-pressure refill hose(s) will be attached to cascade system for cylinder refill.
3.	Five (5)	30-minute rescue pack self-contained breathing apparatuses (SCBA).
4.	Six (6)	5-minute escape packs with compressed air cylinders.
5.	Five (5)	5-minute airline work units with emergency escape cylinders.
6.	One (1)	4-channel continuous electronic H2S monitor with audible and visual alarms. The set points for these alarms are 10 ppm for the low alarm and 15 ppm for the high alarm.
7.	Two (2)	Portable hand operated pump type detection units with tubes for hydrogen sulfide and sulfur dioxide.
8.	One (1)	Oxygen resuscitator with spare oxygen cylinder.
9.	One (1)	Trauma first aid kit
10.	Four (4)	Windsocks
11.	At least one (1)	Well condition sign with 3 flag system.
12.	Two (2)	Safe Briefing Area (SBA) signs
13.	Two (2)	Electric explosion proof fans
14.	Two (2)	30 # fire extinguishers
15.	Six (6)	Battery powered voice mikes for communication when wearing air masks.
16.	One (1)	Battery powered combustible gas meter

## **V. Well Ignition Procedures**

If it should become apparent that an uncontrolled release of hydrogen sulfide to the atmosphere might endanger the health and safety of the public or well site personnel, the Wolverine Wellsite Supervisor will make a decision to ignite the well. The following procedure should be followed before attempting to ignite the well.

A. Ignition equipment - The following equipment will be available for on-site for use by the ignition team.

1. One 12 gauge flare gun with flare shells
2. Two 500 ft. Fire resistant retrieval ropes
3. One portable combustible gas meter
4. Self contained breathing apparatus (SCBA) for each member of the ignition team.
5. One backup vehicle with communication equipment

B. Ignition Procedures

1. The Wellsite Supervisor will ensure that well site personnel are evacuated to a safe area upwind of the well bore prior to any ignition action.
2. The Wellsite Supervisor and a designated partner "buddy" backed up by well site safety personnel (if available) will comprise the ignition team. All team members will be wearing 30 minute SCBAs.
3. The backup crew will be positioned near a radio-equipped vehicle at a safe distance from the sour gas release. They will standby to rescue the actual team igniting the well.
4. The partner of the ignition team will carry a combustible gas/ hydrogen sulfide meter to continuously monitor the area in which they are working and define the perimeter of the gas cloud.
5. The Wellsite Supervisor will carry the flare gun and shells.
6. The ignition team will determine the hazardous area and establish safe working perimeters. Once this is identified the team will proceed upwind of the leak and fire into the area with flare gun. If trouble is encountered in trying to light the leak, retry to ignite by firing the flare shells at 45 and 90 angles to the gas source, but DO NOT approach closer to the leak.
7. After ignition, monitor for sulfur dioxide and work with the support group to restrict access to the contaminated area.

## **VI. Residents - Public in R.O.E.**

There are no permanent residents within a 1 mile radius of the well site. Wolverine may have personnel working in the area and their contact numbers will be included. The surrounding area is federally and privately owned and maintained. This land may be used for recreational purposes including hunting and recreational vehicles any time during the drilling or completion of this well.

## **VII. Emergency Phone Directory**

### **A. Wolverine Gas and Oil Company of Utah, LLC**

Tony Cook	(Production Forman – Wolverine)	office	435-896-2956
		cell	435-201-1622
		truck	435-201-2871
Greg Todd	(Area Manager – Nabors Well Services)	office	435-722-3451
Fernando Ortega	(Foreman, On Site Rep – Wolverine)	cell	435-633-3175
		truck	435-724-8220
Ed Higuera	(Operations Manager – Wolverine)	office	616-458-1150
		cell	616-690-0023

### **B. Emergency Services Phone List**

1. Sevier Valley Medical Center - Richfield, UT .....435 - 896-8271
2. Gunnison Valley Hospital, Sanpete County .....435 - 528-7246
3. Ambulance Services – Sevier County, UT .....911 or 435-896-6471
4. Ambulance Services – Sanpete County, UT .....911 or 435-835-2191
5. Sheriff Department - Sevier County, UT .....911 or 435-896-6471
6. Sheriff Department – Sanpete County, UT .....911 or 435-835-2191
7. Highway Patrol - Utah .....800 - 222-0038
8. Fire Department - Sevier County .....911 or 435-896-6471
9. Al McKee, BLM – Salt Lake City, UT (cell phone) .....801- 828-7498
10. Utah Division Oil, Gas & Mining - Salt Lake City, UT .....801- 538-5277
11. Medical Helicopter - Air Med- Salt Lake City, UT .....800 - 453-0120
12. Utah OSHA (Mark LeBlanc) .....801- 530-6862
13. Sevier Valley Medical Center - Richfield, UT .....435-896-8271

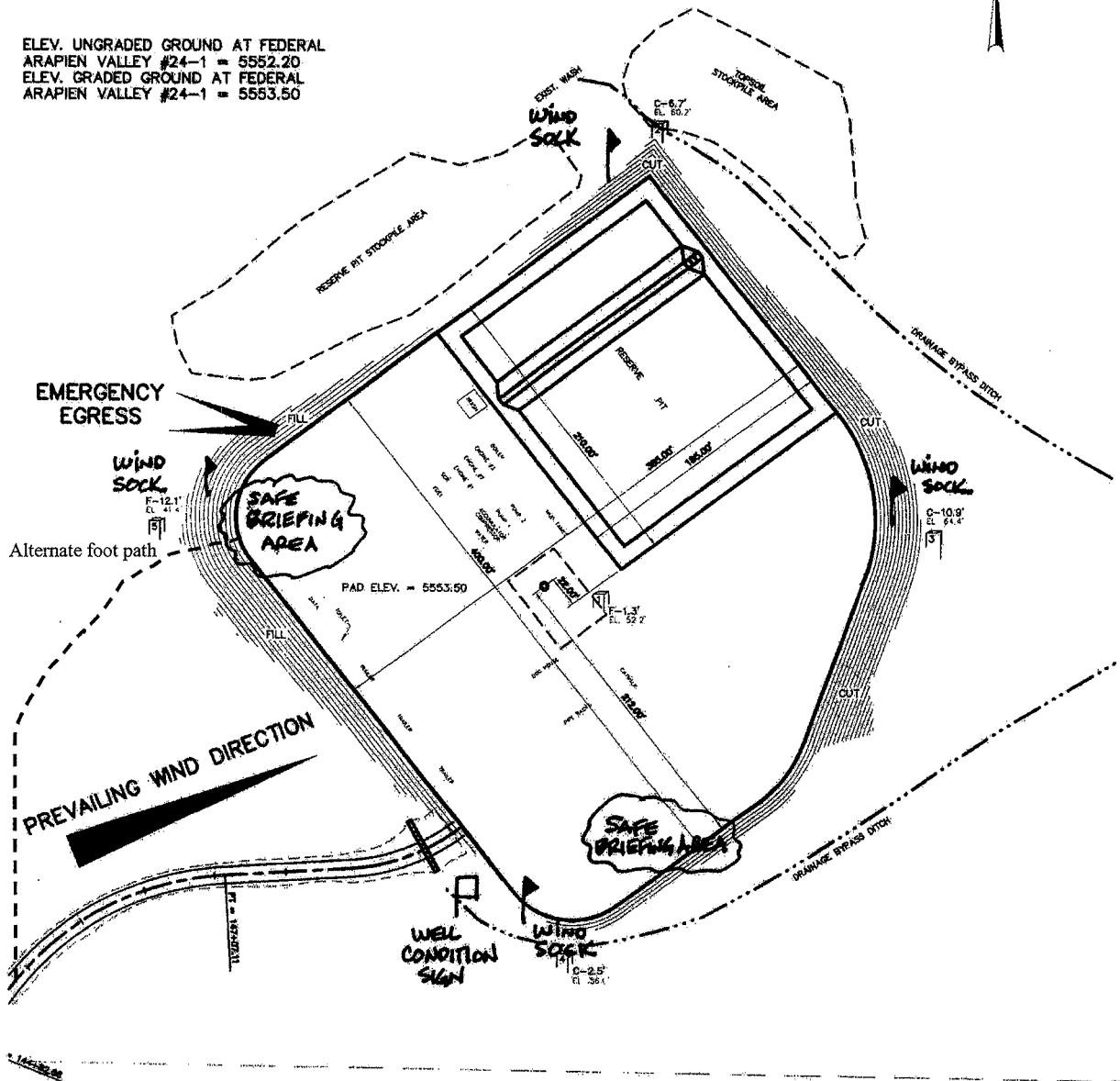
**PAD EARTHWORK VOLUMES**

CUT = 14,635 yards  
REQ'D FILL = 11,328 yards

PIT CAPACITY = 49,772 Bbls (2' FREEBOARD)  
PIT VOLUME = 14,119 C.Y.

TOTAL PAD AREA: 3.235 ACRES  
PIT AREA: 0.913 ACRES

ELEV. UNGRADED GROUND AT FEDERAL  
ARAPIEN VALLEY #24-1 = 5552.20  
ELEV. GRADED GROUND AT FEDERAL  
ARAPIEN VALLEY #24-1 = 5553.50



**Jones & DeMille Engineering**

1535 South 100 West - Richfield, Utah 84701  
Phone (435) 896-8266 Fax (435) 896-8268  
www.jonesanddemille.com



SCALE: 1"=100'

Revised Well Layout for		FIGURE: -
Wolverine Gas and Oil Co. of Utah L.L.C.		
Wolverine Federal Arapien Valley 24-1		
DRAWN: LG/BL 04-06	PEN: TBL: jtdmrd-hp2600.csb	PROJECT: 0506-124
CHECK: DHR 04-06	FILE: DESIGN	LAST UPDATE: 5/1/2006
		SHEET: -

## PROPERTY OF GAS

If gas should be produced, it could be a mixture of Carbon Dioxide, Hydrogen Sulfide, and Methane.

### TOXICITY OF VARIOUS GASES

<u>Common Name</u>	<u>Chemical Formula</u>	<u>Specific Gravity of Air=1</u>	<u>1 Threshold Limit</u>	<u>2 Hazardous Limit</u>	<u>3 Lethal Concern</u>
Hydrogen Cyanide	HCN	0.94	10 ppm	150 ppm/hr	300 ppm
Hydrogen Sulfide	H <sub>2</sub> S	1.18	10 ppm	250 ppm/hr	600 ppm
Sulfur Dioxide	SO <sub>2</sub>	2.21	2 ppm	-----	1,000 ppm
Chloride	CL <sub>1</sub>	2.45	1 ppm	4 ppm/hr	1,000 ppm
Carbon Monoxide	CO	0.97	50 ppm	400 ppm/hr	1,000 ppm
Carbon Dioxide	CO <sub>2</sub>	1.52	5,000 ppm	5%	10%
Methane	CH <sub>4</sub>	0.55	90,000 ppm	Combustible Above 5% in Air	-----

1. Threshold = Concentration at which it is believed that all workers may repeatedly be exposed, day after day, without adverse side effects.

2. Hazardous = Concentration that may cause death.

3. Lethal = Concentration that will cause death with short-term exposure.



# **HYDROGEN SULFIDE**

## **GENERAL PROPERTIES**

Hydrogen Sulfide itself is a colorless and transparent gas and is flammable. It is heavier than air and, hence, may accumulate in low places.

Although the slightest presence of H<sub>2</sub>S in the air is normally detectable by its characteristic "Rotten Egg" odor, it is dangerous to rely on the odor as a means of detecting excessive concentrations because the sense of smell is rapidly lost allowing lethal concentrations to be accumulated without warning. The following table indicates the poisonous nature of Hydrogen Sulfide, which is more toxic than Carbon Monoxide.

**COMMON NAMES:** Sour Gas, Rotten Egg Gas, Sulphurated Hydrogen, Hydrogen sulfide, Stink Damp, H<sub>2</sub>S, Acid Gas, Sweet Gas\*

## **PHYSICAL-CHEMICAL PROPERTIES**

- Chemical Formula .....H<sub>2</sub>S
1. Specific Gravity (Air = 1.000) .....1.193 (@ 77°F)
2. Color.....None
3. Odor .....Compared to Rotten Eggs
4. Odor Threshold.....0.13 part of 1 ppm
5. Corrosivity.....Reacts with metals, plastics, tissues and nerves.
6. Solubility in Water.....4.0 to 1 in H<sub>2</sub>O @ 32°F  
2.6 to 1 in H<sub>2</sub>O @ 68°F
7. Effects on Humans .....Olfactory nerves, respiratory nerves, irritates  
sensitive membranes in eyes, nose, and throat.
8. Vapor Pressure.....19.6 atmospheres at 25°C
9. Explosive Limits.....4.3% to 46% by volume in air.  
\* H<sub>2</sub>S is a sweet tasting Gas, but often the word "tasting" is left out.
10. Ignition Temperature.....18°F (Burns with a pale blue flame)
11. Molecular Weight.....34.08
12. Conversion Factors..... 1 mg/1 of air = 717 ppm (at 25°C and 760  
mm HG). 1 ppm = 0.00139 mg/1 of air.
13. pH.....3 in water

## **INDUSTRIAL OCCURRENCES**

Hydrogen Sulfide exposures occur in certain processes in the petroleum industry, chemical plants, chemical laboratories, sulfur and gypsum mines, viscose rayon and rubber industries, tanneries, and in the manufacture of some chemicals, dyes, and pigments. It may be encountered in excavations in the swampy or filled ground. It is produced when sulfur-containing organic matter decomposes, and it can therefore be found in sewage or organic-waste treatment plants. A common sewer gas, it may find its way into utility manhole, particularly dangerous when encountered in tanks, vessels, and other enclosed spaces.

## **TOXIC PROPERTIES**

Hydrogen Sulfide is an extremely toxic and irritating gas. Free Hydrogen Sulfide in the blood reduces its oxygen carrying capacity, thereby depressing the nervous system. Sufficiently high concentrations can cause blockage of the phrenic nerve, resulting in immediate collapse and death due to respiratory failure and asphyxiation.

Because Hydrogen Sulfide is oxidized quite rapidly to sulfates in the body, no permanent after effects occur in cases of recovery from acute exposures unless oxygen deprivation of the nervous system is prolonged. However, in cases of acute exposures, there is always the possibility that pulmonary edema may develop. It is also reported that symptoms such as nervousness, dry nonproductive coughing, nausea, headache, and insomnia, lasting up to about 3 days have occurred after acute exposures to Hydrogen Sulfide.

At low concentrations the predominant effect of Hydrogen Sulfide is on the eyes and respiratory tract. Eye irritation, conjunctivitis, pain, lacrimation, keratitis, and photophobia may persist for several days. Respiratory tract symptoms include coughing, painful breathing, and pain in the nose and throat.

There is no evidence that repeated exposures to Hydrogen Sulfide results in accumulative or systemic poisoning. Effects such as eye irritation, respiratory tract irritation, slow pulse rate, lassitude, digestive disturbances, and cold sweats may occur, but these symptoms disappear in a relatively short time after removal from the exposure. Repeated exposure to Hydrogen Sulfide does not appear to cause any increase or decrease in susceptibility to this gas.

The paralytic effect of Hydrogen Sulfide on the olfactory nerve is probably the most significant property of the gas. This paralysis may create a false sense of security. A worker can be overcome after the typical rotten-egg odor has disappeared. Rather than the characteristic Hydrogen Sulfide odor, some victims of sudden acute overexposure have reported a brief sickeningly sweet odor just prior to unconsciousness.

Subjective olfactory responses to various concentrations of Hydrogen Sulfide may be summarized as follows:

0.02 ppm	No odor
0.13 ppm	Minimal perceptible odor
0.77 ppm	Faint, but readily perceptible odor
4.60 ppm	Easily detectable, moderate odor
27.0 ppm	Strong, unpleasant odor, but not intolerable

Physiological responses to various concentrations of Hydrogen Sulfide have been reported as follows:

10 ppm	Beginning eye irritation
50-100 ppm	Slight conjunctivitis and respiratory tract irritation after 1 hour exposure
100 ppm	Coughing, eye irritation, loss of sense of smell after 2-15 minutes. Altered respiration, pain in the eyes, and drowsiness after 15-30 minutes, followed by throat irritation after 1 hour. Several hours <sup>1</sup> exposure results in gradual increase in severity of these symptoms and death may occur within the next 48 hours
200-300 ppm	Marked conjunctivitis and respiratory tract irritation after 1 hour exposure
500-700 ppm	Loss of consciousness and possibly death in 30 minutes
700 ppm	Rapid unconsciousness, cessation of respiration, and death
1000-2000 ppm	Unconsciousness at once, with early cessation of respiration and death in a few minutes. Death may occur even if individual is removed to fresh air at once.

## **ACCEPTABLE CONCENTRATIONS**

### **ACCEPTABLE EIGHT-HOUR TIME-WEIGHTED AVERAGE**

To avoid discomfort, the Time-Weighted average concentration of Hydrogen Sulfide shall not exceed 10 ppm.

### **ACCEPTABLE CEILING CONCENTRATION**

The acceptable concentration for protection of health for an eight-hour, five-day week shall be 20 ppm. Fluctuations are to occur below this concentration.

### **ACCEPTABLE MAXIMUM FOR PEAKS ABOVE ACCEPTABLE BASE LINE FOR CONTINUOUS EXPOSURE**

A single-peak concentration not exceeding 50 ppm for a maximum of 10 minutes is allowable provided that the daily time-weighted average is not exceeded.

## H<sub>2</sub>S EQUIVALENTS

<u>Parts per Million</u>	<u>Percents</u>	<u>Grains per 100 cu. Ft.</u>
1	0.0001	0.055
10	0.001	0.55
18	0.0018	1.0
100	0.01	5.5
1000	0.1	55.5
10000	1.0	555.5

Grains per 100 cu. Ft. = % by volume Mole 636.4

1% by volume = 10,000 ppm

## **SULFUR DIOXIDE**

Sulfur Dioxide (SO<sub>2</sub>) is a colorless, transparent gas and is non-flammable.

Sulfur Dioxide is produced during the burning of H<sub>2</sub>S. Although SO<sub>2</sub> is heavier than air, it will be picked up by a breeze and carried downwind at elevated temperatures. While Sulfur Dioxide is extremely irritating to the eyes and mucous membranes of the upper respiratory tract, it has exceptionally good warning powers in this respect.

### CONCENTRATIONS

<u>%SO<sub>2</sub></u>	<u>ppm</u>
------------------------	------------

0.0002	2
--------	---

0.0005	5
--------	---

0.0012	12
--------	----

0.015	150
-------	-----

0.05	500
------	-----

### EFFECTS

Safe for eight (8) hour exposure

Pungent odor - normally a person can detect SO<sub>2</sub> in this range.

Throat irritation, coughing, constriction of the chest, tearing and smarting of the eyes.

So irritating that it can only be endured for a few minutes.

Causes a sense of suffocation, even with the first breath.

## PHYSICAL PROPERTIES AND CHARACTERISTICS

Chemical Formula ..... SO<sub>2</sub>

1. Specific Gravity ..... 2.212

2. Color ..... None

3. Flammable ..... No

4. Odor ..... Characteristic, pungent, gives ample warning of its presence.

5. Corrosivity ..... Dry---not corrosive to ordinary metals.  
Wet---corrosive to most common metals.
6. Allowable Concentrations ..... 2 ppm (ACGIH and OSHA)
7. Effects on Humans ..... Irritates eyes, throat and upper  
respiratory system

### **TOXIC PROPERTIES**

Sulfur Dioxide is an irritating gas in its vapor form and the odor is so intensely irritating that concentrations of 3 to 5 parts per million in the air are readily detectable by the normal person. In higher concentrations, the severely irritating effect of the gas makes it unlikely that any person would be able to remain in a Sulfur Dioxide contaminated atmosphere unless they were unconscious or trapped.

Sulfur Dioxide gas is intensely irritating to the eyes, throat, and upper respiratory system. Inhalation of this gas in concentrations of 8 to 12 parts per million in air causes throat irritation, coughing, constriction of the chest, tearing and smarting of the eyes. 150 parts per million is so extremely irritating that it can be endured only for a few minutes. 500 parts per million is so acutely irritating to the upper respiratory tract that it causes a sense of suffocation, even with the first breath.

Out of numerous reported exposures to Sulfur Dioxide, there are few references that would indicate pneumonia as an after effect.

STATE OF UTAH  
DEPARTMENT OF NATURAL RESOURCES  
DIVISION OF OIL, GAS AND MINING

FORM 9

SUNDRY NOTICES AND REPORTS ON WELLS

Do not use this form for proposals to drill new wells, significantly deepen existing wells below current bottom-hole depth, reenter plugged wells, or to drill horizontal laterals. Use APPLICATION FOR PERMIT TO DRILL form for such proposals.

1. TYPE OF WELL OIL WELL <input checked="" type="checkbox"/> GAS WELL <input type="checkbox"/> OTHER _____		5. LEASE DESIGNATION AND SERIAL NUMBER: UTU-80907
2. NAME OF OPERATOR: Wolverine Gas and Oil Company of Utah, LLC		6. IF INDIAN, ALLOTTEE OR TRIBE NAME: NA
3. ADDRESS OF OPERATOR: 55 Campau NW CITY Grand Rapids STATE MI ZIP 49503-2616		7. UNIT or CA AGREEMENT NAME: Wolverine Federal Unit
PHONE NUMBER: (616) 458-1150		8. WELL NAME and NUMBER: Wolv. Fed. Arapien Valley 24-1
4. LOCATION OF WELL FOOTAGES AT SURFACE: 2331' FNL, 549' FWL		9. API NUMBER: 4303930030
QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN: SWNW 24 20S 1E S		10. FIELD AND POOL, OR WILDCAT: Wildcat
COUNTY: Sanpete		STATE: UTAH

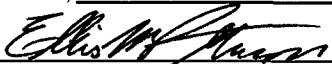
11. CHECK APPROPRIATE BOXES TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA

TYPE OF SUBMISSION	TYPE OF ACTION		
<input type="checkbox"/> NOTICE OF INTENT (Submit in Duplicate) Approximate date work will start: _____	<input type="checkbox"/> ACIDIZE	<input type="checkbox"/> DEEPEN	<input type="checkbox"/> REPERFORATE CURRENT FORMATION
	<input type="checkbox"/> ALTER CASING	<input type="checkbox"/> FRACTURE TREAT	<input type="checkbox"/> SIDETRACK TO REPAIR WELL
	<input type="checkbox"/> CASING REPAIR	<input type="checkbox"/> NEW CONSTRUCTION	<input type="checkbox"/> TEMPORARILY ABANDON
	<input type="checkbox"/> CHANGE TO PREVIOUS PLANS	<input type="checkbox"/> OPERATOR CHANGE	<input type="checkbox"/> TUBING REPAIR
	<input type="checkbox"/> CHANGE TUBING	<input type="checkbox"/> PLUG AND ABANDON	<input type="checkbox"/> VENT OR FLARE
<input checked="" type="checkbox"/> SUBSEQUENT REPORT (Submit Original Form Only) Date of work completion: _____	<input type="checkbox"/> CHANGE WELL NAME	<input type="checkbox"/> PLUG BACK	<input type="checkbox"/> WATER DISPOSAL
	<input type="checkbox"/> CHANGE WELL STATUS	<input type="checkbox"/> PRODUCTION (START/RESUME)	<input type="checkbox"/> WATER SHUT-OFF
	<input type="checkbox"/> COMMINGLE PRODUCING FORMATIONS	<input type="checkbox"/> RECLAMATION OF WELL SITE	<input checked="" type="checkbox"/> OTHER: Activity Update
	<input type="checkbox"/> CONVERT WELL TYPE	<input type="checkbox"/> RECOMPLETE - DIFFERENT FORMATION	

12. DESCRIBE PROPOSED OR COMPLETED OPERATIONS. Clearly show all pertinent details including dates, depths, volumes, etc.

CONTINUED CONFIDENTIAL STATUS REQUESTED

The drilling rig was released on 2/28/2008 and moved off location. Completion and testing activities since 10/12/08 include the following. Perforated Navajo1 at 8920'- 8922' and 8904'- 8914' with 3 SPF using 4" hollow carriers. Set RBP at 8930' and packer at 8800'. Swabbed tubing dry with no fluid inflow from perforations at 8920'- 8922' and 8904'- 8914'. Moved RBP to 8898' and pulled packer. Perforated Navajo1 at 8881'- 8883', 8865'- 8871', and 8854'- 8860' with 3 SPF using 4" hollow carriers. Ran packer and set it at 8746'. Swabbed tubing dry with no fluid inflow from perforations at 8881'- 8883', 8865'- 8871', and 8854'- 8860'. Moved packer to 8930'. Broke down Navajo1 perforations at 8854'- 8922' using a total of 56 Bbls of 4% KCl water and additives and 150 ball sealers. Swabbed perforations at 8854'- 8922' with no significant fluid recovery. Set a CICR at 8840' and squeezed the Navajo1 perforations at 8854'- 8922' with 50 sacks (11.3 Bbls) of 50:50 poz cement with latex. Drilled out cement and cast iron plugs from 8838' to Navajo2 perforations at 12,290' - 12,316'. Ran packer on tubing and set it at 12,210' with BH pressure gauges in place. Performed a pump-in test with 30 Bbls of 4% KCl water. Tubing is currently being pulled to recover the pressure gauges after which new tubing and packer will be run and the Navajo2 will be production tested until being fracture stimulated as planned for December 22, 2008.

NAME (PLEASE PRINT) Ellis M. Peterson	TITLE Senior Production Engineer
SIGNATURE 	DATE 12/1/2008

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DEC 08 2008

DIV. OF OIL, GAS & MINING

**STATE OF UTAH**  
DEPARTMENT OF NATURAL RESOURCES  
DIVISION OF OIL, GAS AND MINING

5. LEASE DESIGNATION AND SERIAL NUMBER:  
UTU-80907

**SUNDRY NOTICES AND REPORTS ON WELLS**

Do not use this form for proposals to drill new wells, significantly deepen existing wells below current bottom-hole depth, reenter plugged wells, or to drill horizontal laterals. Use APPLICATION FOR PERMIT TO DRILL form for such proposals.

1. TYPE OF WELL OIL WELL ☒ GAS WELL ☐ OTHER \_\_\_\_\_

6. IF INDIAN, ALLOTTEE OR TRIBE NAME:  
NA

7. UNIT or CA AGREEMENT NAME:  
Wolverine Federal Unit

2. NAME OF OPERATOR:  
Wolverine Gas and Oil Company of Utah, LLC

8. WELL NAME and NUMBER:  
Wolv. Fed. Arapien Valley 24-1

3. ADDRESS OF OPERATOR:  
55 Campau NW CITY Grand Rapids STATE MI ZIP 49503-2616

PHONE NUMBER:  
(616) 458-1150

9. API NUMBER:  
4303930030

4. LOCATION OF WELL

10. FIELD AND POOL, OR WILDCAT:  
Wildcat

FOOTAGES AT SURFACE: 2331' FNL, 549' FWL

COUNTY: Sanpete

QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN: SWNW 24 20S 1E S

STATE: UTAH

11. CHECK APPROPRIATE BOXES TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA

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	<input type="checkbox"/> CONVERT WELL TYPE	<input type="checkbox"/> RECOMPLETE - DIFFERENT FORMATION		

12. DESCRIBE PROPOSED OR COMPLETED OPERATIONS. Clearly show all pertinent details including dates, depths, volumes, etc.

**CONTINUED CONFIDENTIAL STATUS REQUESTED**

The drilling rig was released on 2/28/2008 and moved off location. Completion and testing activities since 12/01/08 include the following. Tubing was pulled and BHP gauges were recovered. New 2-7/8" tubing was hydrotested and landed with the packer set at 9471'. Attempted to produce well with no success from perforations at 12,290' - 12,316' prior to stimulating. The isolated perforations were fracture stimulated on 1/13/2009 using 50,000 lbs of 30/50 mesh sintered bauxite and 694 Bbls of fracturing fluid. Coiled tubing was used to clean proppant out to PBTD. Well was produced for a total of nine days following fracture stimulation and before being temporarily shut in 01/22/2009 due to lack of available oil storage capacity. Final flow rates before being shut in were 262 BOPD, 711 MCFD, and 13 BWPD.

NAME (PLEASE PRINT) Ellis M. Peterson

TITLE Senior Production Engineer

SIGNATURE

DATE 1/28/2009

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**FEB 04 2009**

**DIV. OF OIL, GAS & MINING**

STATE OF UTAH  
DEPARTMENT OF NATURAL RESOURCES  
DIVISION OF OIL, GAS AND MINING

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FORM 9

SUNDRY NOTICES AND REPORTS ON WELLS

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3. ADDRESS OF OPERATOR:	55 Campau NW CITY Grand Rapids STATE MI ZIP 49503-2616	7. UNIT or CA AGREEMENT NAME: Wolverine Federal Unit
	PHONE NUMBER: (616) 458-1150	8. WELL NAME and NUMBER: Wolv. Fed. Arapien Valley 24-1
4. LOCATION OF WELL		9. API NUMBER: 4303930030
		10. FIELD AND POOL, OR WILDCAT: Wildcat

FOOTAGES AT SURFACE: 2331' FNL, 549' FWL

COUNTY: Sanpete

QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN: SWNW 24 20S 1E S

STATE: UTAH

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12. DESCRIBE PROPOSED OR COMPLETED OPERATIONS. Clearly show all pertinent details including dates, depths, volumes, etc.

CONTINUED CONFIDENTIAL STATUS REQUESTED

The drilling rig was released on 2/28/2008 and moved off location. The well is currently idle and has been shut in due to lack of market for the produced oil since 01/22/2009. When oil sales resume, production testing of the fracture stimulated perforations at 12,290' - 12,316' will continue.

NAME (PLEASE PRINT) Ellis M. Peterson	TITLE Senior Production Engineer
SIGNATURE 	DATE 2/27/2009

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MAR 05 2009

DIV. OF OIL, GAS & MINING



STATE OF UTAH  
DEPARTMENT OF NATURAL RESOURCES  
DIVISION OF OIL, GAS AND MINING

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FORM 9

SUNDRY NOTICES AND REPORTS ON WELLS

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3. ADDRESS OF OPERATOR: 55 Campau NW CITY Grand Rapids STATE MI ZIP 49503-2616		7. UNIT or CA AGREEMENT NAME: Wolverine Federal Unit
PHONE NUMBER: (616) 458-1150		8. WELL NAME and NUMBER: Wolv. Fed. Arapien Valley 24-1
4. LOCATION OF WELL FOOTAGES AT SURFACE: 2331' FNL, 549' FWL QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN: SWNW 24 20S 1E S		9. API NUMBER: 4303930030
		10. FIELD AND POOL, OR WILDCAT: Wildcat
		COUNTY: Sanpete
		STATE: UTAH

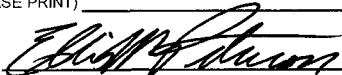
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12. DESCRIBE PROPOSED OR COMPLETED OPERATIONS. Clearly show all pertinent details including dates, depths, volumes, etc.

CONTINUED CONFIDENTIAL STATUS REQUESTED

The drilling rig was released on 2/28/2008 and moved off location. Production testing of the fracture stimulated perforations at 12,290' - 12,316' was resumed on 3/11/2009 and the well is currently producing approximately 140 BOPD, 3 BWPD, and 557 MCFD. The gas is being flared per approval of UDOGM and BLM and the well has produced for 29 days of the approved 60-day flaring period.

NAME (PLEASE PRINT) Ellis M. Peterson	TITLE Senior Production Engineer
SIGNATURE 	DATE 3/27/2009

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UNITED STATES  
DEPARTMENT OF THE INTERIOR  
BUREAU OF LAND MANAGEMENT**CONFIDENTIAL** COPYFORM APPROVED  
OMB NO. 1004-0137  
Expires: March 31, 2007

## WELL COMPLETION OR RECOMPLETION REPORT AND LOG

1a. Type of Well <input checked="" type="checkbox"/> Oil Well <input type="checkbox"/> Gas Well <input type="checkbox"/> Dry <input type="checkbox"/> Other		5. Lease Serial No. <b>UTU-80907</b>	
b. Type of Completion: <input checked="" type="checkbox"/> New Well <input type="checkbox"/> Work Over <input type="checkbox"/> Deepen <input type="checkbox"/> Plug Back <input type="checkbox"/> Diff. Resvr., Other _____		6. If Indian, Allottee or Tribe Name <b>N.A.</b>	
2. Name of Operator <b>Wolverine Gas and Oil Co. of Utah, LLC</b>		7. Unit or CA Agreement Name and No. <b>Wolverine Unit</b>	
3. Address <b>55 Campau NW, Grand Rapids, MI 49503</b>		8. Lease Name and Well No. <b>Wolv. Fed. Arapien Valley 24-1</b>	
3a. Phone No. (include area code) <b>616-458-1150</b>		9. AFI Well No. <b>43-039-30030</b>	
4. Location of Well (Report location clearly and in accordance with Federal requirements)*  At surface <b>2331' FNL, 549' FWL, Sec. 24, T20S, R1E, SLB&amp;M</b>  At top prod. interval reported below <b>2330' FNL, 590' FWL, Sec. 24, T20S, R1E</b> <i>per HSM review</i>  At total depth <b>2370' FNL, 620' FWL, Sec. 24, T20S, R1E</b> <i>7/11/08 per D&amp;D</i>		10. Field and Pool, or Exploratory <b>Exploratory</b>	
14. Date Spudded <b>11/09/2007</b>		15. Date T.D. Reached <b>02/21/2008</b>	
16. Date Completed <b>04/27/2009</b> <input type="checkbox"/> D & A <input checked="" type="checkbox"/> Ready to Prod.		17. Elevations (DF, RKB, RT, GL)* <b>5580' KB, 5554' GL</b>	
18. Total Depth: MD <b>13050'</b> TVD <b>13047'</b>		19. Plug Back T.D.: MD <b>12755'</b> TVD <b>12752'</b>	
20. Depth Bridge Plug Set: MD <b>12369'</b> TVD <b>12366'</b>		21. Type Electric & Other Mechanical Logs Run (Submit copy of each) <b>HRLLA, FMI, CN/LDL, BCS, ISCE, CBL</b> <i>GR, Pex. Temp.</i>	
22. Was well cored? <input checked="" type="checkbox"/> No <input type="checkbox"/> Yes (Submit analysis) Was DST run? <input checked="" type="checkbox"/> No <input type="checkbox"/> Yes (Submit report) Directional Survey? <input type="checkbox"/> No <input checked="" type="checkbox"/> Yes (Submit copy)			

## 23 Casing and Liner Record (Report all strings set in well)

Hole Size	Size/Grade	Wt. (#/ft.)	Top (MD)	Bottom (MD)	Stage Cementer Depth	No. of Sks. & Type of Cement	Slurry Vol. (BBL)	Cement Top*	Amount Pulled
32.0"	24"	0.25 wall	Surface	120		redi-mix	38	Surface	0
17.5"	13.375 J	68.0	Surface	2017		405 Extended	299	Surf. (CIRC)	0
"	"	"				410 Type III	97		
12.25"	9.625 P	47.0/53.5	Surface	10373		3250 Elas+N2	857	Surf. (CIRC)	0
8.5"	5.50"	20.0 P	Surface	12755	9950	735 50:50 Poz	242		
"	"	"			"	1635 G	349	2990 (CBL)	0

## 24 Tubing Record

Size	Depth Set (MD)	Packer Depth (MD)	Size	Depth Set (MD)	Packer Depth (MD)	Size	Depth Set (MD)	Packer Depth (MD)
2 7/8	9476	9462						

## 25. Producing Intervals

Formation	Top	Bottom	Perforated Interval	Size	No. Holes	Perf. Status
A) Navajo2	12373	12380	12373-12380	0.40"	42	below CBP & cement
B) Navajo2	12290	12316	8420-8556	0.40"	156	Open
C) Navajo1	9217	9222	9217-9222	0.40"	30	PA - squeezed
D) See Supplemental Sheet			See Supplemental Sheet			

## 27. Acid, Fracture, Treatment, Cement Squeeze, etc.

Depth Interval	Amount and Type of Material
12373-12380	None
12290-12316	50,000 lbs 30/50 mesh bauxite in 694 Bbls fluid
9217-9222	Cement squeeze with 50 sacks through CICR
See Supplemental Sheet	

## 28. Production - Interval A

Date First Produced	Test Date	Hours Tested	Test Production	Oil BBL	Gas MCF	Water BBL	Oil Gravity Corr. API	Gas Gravity	Production Method
04/16/2008	04/25/2008	8	→	29	100	0	50.8		Flowing
Choke Size	Tbg. Press. Flwg. SI	Csg. Press.	24 Hr. Rate	Oil BBL	Gas MCF	Water BBL	Gas/Oil Ratio	Well Status	
14/64	SI 400		→	87	300	04	3448		Interval plugged back below CIBP

## 28a. Production - Interval B

Date First Produced	Test Date	Hours Tested	Test Production	Oil BBL	Gas MCF	Water BBL	Oil Gravity Corr. API	Gas Gravity	Production Method
05/04/2008	04/16/2009	24	→	82	394	0	54.9	0.838	Flowing w/ plunger lift
Choke Size	Tbg. Press. Flwg. SI	Csg. Press.	24 Hr. Rate	Oil BBL	Gas MCF	Water BBL	Gas/Oil Ratio	Well Status	
48/64	SI 80		→	82	394	0	4805		Shut in but capable of producing

\*(See instructions and spaces for additional data on page 2)

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## 28b. Production - Interval C

Date First Produced	Test Date	Hours Tested	Test Production	Oil BBL	Gas MCF	Water BBL	Oil Gravity Corr. API	Gas Gravity	Production Method
05/29/2008	05/29/2008	10	→	20	114	245	48.3	1.439	Flowing
Choke Size	Tbg. Press. Flwg. SI	Csg. Press.	24 Hr. Rate	Oil BBL	Gas MCF	Water BBL	Gas/Oil Ratio	Well Status	
48/64	SI 55		→	48	274	588	5708	Interval plugged by squeezing with cement	

## 28c. Production - Interval D

Date First Produced	Test Date	Hours Tested	Test Production	Oil BBL	Gas MCF	Water BBL	Oil Gravity Corr. API	Gas Gravity	Production Method
			→						
Choke Size	Tbg. Press. Flwg. SI	Csg. Press.	24 Hr. Rate	Oil BBL	Gas MCF	Water BBL	Gas/Oil Ratio	Well Status	
	SI		→					See Supplemental Sheet	

## 29. Disposition of Gas (Sold, used for fuel, vented, etc.)

Flared during testing

## 30. Summary of Porous Zones (Include Aquifers):

Show all important zones of porosity and contents thereof: Cored intervals and all drill-stem tests, including depth interval tested, cushion used, time tool open, flowing and shut-in pressures and recoveries.

## 31. Formation (Log) Markers

Formation	Top	Bottom	Descriptions, Contents, etc.	Name	Top Meas. Depth
Navajo 1	8853	9813	Oil, Gas, and Water	Arapien	Surface
Navajo2	12121	13050	Oil, Gas, and Water	Twin Creek 1	8548
				Navajo 1	8853
				Kayenta	9813
				Wingate	9940
				Chinle	10278
				Shinarump	10673
				Moenkopi	10765
				Sinbad	11642
				Black Dragon	11915
				Navajo2	12121

## 32. Additional remarks (include plugging procedure):

## 33. Indicate which items have been attached by placing a check in the appropriate boxes:

- ☒ Electrical/Mechanical Logs (1 full set req'd.)
 ☒ Geologic Report
 ☐ DST Report
 ☒ Directional Survey
 ☐ Sundry Notice for plugging and cement verification
 ☐ Core Analysis
 ☐ Other:

## 34. I hereby certify that the foregoing and attached information is complete and correct as determined from all available records (see attached instructions)\*

Name (please print) Ellis PetersonTitle Sr. Production EngineerSignature Ellis Peterson

 Digitally signed by Ellis Peterson  
 DN: cn=Ellis Peterson, o=Hess Corporation, ou=Hess Corporation, email=ellis.peterson@hess.com, c=US  
 Date: 2009.05.05 11:09:05 -0700
 
Date 05/05/2009

Title 18 U.S.C Section 1001 and Title 43 U.S.C Section 1212, make it a crime for any person knowingly and willfully to make to any department or agency of the United States any false, fictitious or fraudulent statements or representations as to any matter within its jurisdiction.

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# Form 3160-4 Supplemental Completion Information Well Completion Report and Log

Wolverine Federal Arapien Valley 24-1

## 25. Producing Intervals

<u>Interval</u>	<u>Formation</u>	<u>Top</u>	<u>Bottom</u>
D)	Navajo1	9145	9166
E)	Navajo1	9104	9131
F)	Navajo1	8942	8948
G)	Navajo1	8854	8922

## 26. Perforation Record

<u>Interval</u>	<u>Perforation Interval</u>	<u>Size</u>	<u>No. Holes</u>	<u>Perf. Status</u>
D)	9145-54, 9160-66	0.40"	90	PA - squeezed
E)	9104-31	0.40"	162	PA - squeezed
F)	8942-48	0.40"	18	PA - squeezed
G)	8854-60, 8865-71, 8881-83 8904-8914, 8920-22	0.40"	78	PA - squeezed

## 27. Acid, Fracture, Treatment, Cement Squeeze, etc.

<u>Interval</u>	<u>Depth Interval</u>	<u>Amount and Type of Material</u>
D)	9145-9166	114 Bbls 4% KCl water w/ 120 ball sealers Cement squeezed with interval (E)
E)	9104-9131	148 Bbls 4% KCl water w/ 240 ball sealers Cement squeezed w/ 100 sks through CICR
F)	8942-8948	Cement squeezed w/ 50 sks through CICR
G)	8854-8922	56 Bbls 4% KCl water w/ 150 ball sealers Cement squeezed w/ 50 sks through CI

## 28c. Production – Interval D

<u>Date First Produced</u>	<u>Test Date</u>	<u>Hours Tested</u>	<u>Test Production</u>	<u>Oil BBL</u>	<u>Gas MCF</u>	<u>Water BBL</u>	<u>Oil Gravity Corr. API</u>	<u>Gas Gravity</u>	<u>Production Method</u>
06/10/2008	06/15/2008	22	→	154	738	55		1.434	flowing
<u>Choke Size</u>	<u>Tbg. Press. Flwg</u>	<u>Csg. Press.</u>	<u>24 Hr. Rate</u>	<u>Oil BBL</u>	<u>Gas MCF</u>	<u>Water BBL</u>	<u>Gas/Oil Ratio</u>	<u>Well Status</u>	
24/64	350		→	168	805	60	4792	Interval plugged by squeezing with cement	

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28d. Production – Interval E

Date First Produced	Test Date	Hours Tested	Test Production	Oil BBL	Gas MCF	Water BBL	Oil Gravity Corr. API	Gas Gravity	Production Method
06/18/2008	06/14/2008	24	→	128	740	217	44.0	1.65	flowing
Choke Size	Tbg. Press. Flwg	Csg. Press.	24 Hr. Rate	Oil BBL	Gas MCF	Water BBL	Gas/Oil Ratio	Well Status	
48/64	270		→	128	740	217	5781	Interval plugged by squeezing with cement	

28e. Production – Interval F

Date First Produced	Test Date	Hours Tested	Test Production	Oil BBL	Gas MCF	Water BBL	Oil Gravity Corr. API	Gas Gravity	Production Method
10/07/2008	10/08/2008	24	→	27	292	0			flowing
Choke Size	Tbg. Press. Flwg	Csg. Press.	24 Hr. Rate	Oil BBL	Gas MCF	Water BBL	Gas/Oil Ratio	Well Status	
48/64	110		→	27	292	0	10815	Interval plugged by squeezing with cement	

28f. Production – Interval G

Date First Produced	Test Date	Hours Tested	Test Production	Oil BBL	Gas MCF	Water BBL	Oil Gravity Corr. API	Gas Gravity	Production Method
10/17/2008	10/22/2008		→	nil	nil	nil			Swabbing – no inflow
Choke Size	Tbg. Press. Flwg	Csg. Press.	24 Hr. Rate	Oil BBL	Gas MCF	Water BBL	Gas/Oil Ratio	Well Status	
			→	nil	nil	nil		Interval plugged by squeezing with cement	

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# Wolverine Gas & Oil Company

**Arapien Valley**

Federal 24-1  
Sec.24-T20S-R1E  
Sanpete County, Utah  
Rig – SST 68

Job # 1633111  
November 5, 2007 -  
Februrary 23, 2008



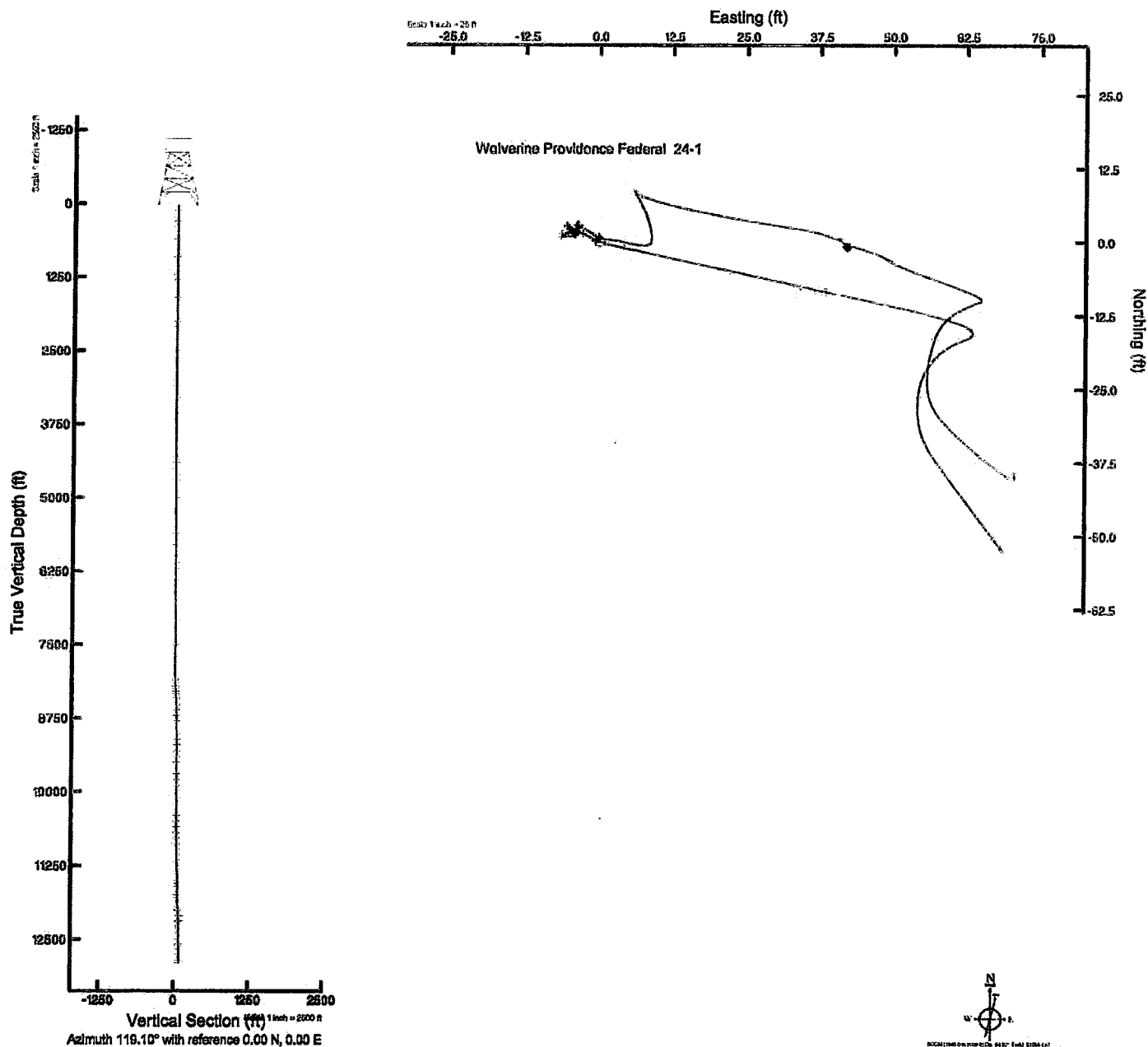
**INTEQ**

Location: UTAH Slot: Wolverine Providence Federal 24-1  
Field: Sanpete County Well: Wolverine Providence Federal 24-1  
Facility: SEC.24-T20S-R1E Wellbore: Wolverine Providence Federal 24-1

Location: UTAH Slot: Wolverine Providence Federal 24-1  
Field: Sanpete County Well: Wolverine Providence Federal 24-1  
Facility: SEC.24-T20S-R1E Wellbore: Wolverine Providence Federal 24-1

1. <u>Project Name</u> 2. <u>Project Manager</u> 3. <u>Project Sponsor</u> 4. <u>Project Charter</u> 5. <u>Project Scope</u> 6. <u>Project Budget</u> 7. <u>Project Risk</u> 8. <u>Project Communication</u> 9. <u>Project Reporting</u> 10. <u>Project Closure</u>	1. <u>Project Name</u> 2. <u>Project Manager</u> 3. <u>Project Sponsor</u> 4. <u>Project Charter</u> 5. <u>Project Scope</u> 6. <u>Project Budget</u> 7. <u>Project Risk</u> 8. <u>Project Communication</u> 9. <u>Project Reporting</u> 10. <u>Project Closure</u>
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**BAKER  
HUGHES**  
**INTEQ**



Example: North = 12 15 degrees and a East North = 60 42 00 00

# Actual Wellpath Report

Wolverine Providence Federal 24-1\_awp

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INTEQ

## REFERENCE WELLPATH IDENTIFICATION

Operator	WOLVERINE GAS & OIL COMPANY	Slot	Wolverine Providence Federal 24-1
Area	UTAH	Well	Wolverine Providence Federal 24-1
Field	Sanpete County	Wellbore	Wolverine Providence Federal 24-1
Facility	SEC.24-T20S-R1E		

## REPORT SETUP INFORMATION

Projection System	NAD83 / Lambert Utah State Planes, Central Zone (4302), feet	Software System	WellArchitect® 2.0
North Reference	True	User	Thomsuzc
Scale	0.999993	Report Generated	9/25/2008 at 1:24:04 PM
Convergence at slot	0.17° West	Database/Source file	Denver/Wolverine Providence Federal_24-1.xml

## WELLPATH LOCATION

	Local coordinates		Grid coordinates		Geographic coordinates	
	North[ft]	East[ft]	Easting[ft]	Northing[ft]	Latitude	Longitude
Slot Location	-15.97	13.88	1567120.46	6824986.74	39°03'21.360"N	111°45'29.213"W
Facility Reference Pt			1567106.62	6825002.75	39°03'21.518"N	111°45'29.389"W
Field Reference Pt			1640261.36	6895768.41	39°15'02.016"N	111°30'02.016"W

## WELLPATH DATUM

Calculation method	Minimum curvature	Rig on NEW (RT) to Facility Vertical Datum	5583.00ft
Horizontal Reference Pt	Slot	Rig on NEW (RT) to Mean Sea Level	5583.00ft
Vertical Reference Pt	Rig on NEW (RT)	Facility Vertical Datum to Mud Line (Facility)	0.00ft
MD Reference Pt	Rig on NEW (RT)	Section Origin	N 0.00, E 0.00 ft
Field Vertical Reference	Mean Sea Level	Section Azimuth	119.10°



# Actual Wellpath Report

Wolverine Providence Federal 24-1\_awp

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INTEQ

REFERENCE WELLPATH DATA SUMMARY			
Operator	WOLVERINE GAS & OIL COMPANY	Slot	Wolverine Providence Federal 24-1
Area	UTAH	Well	Wolverine Providence Federal 24-1
Field	Sanpete County	Wellbore	Wolverine Providence Federal 24-1
Facility	SEC.24-T20S-R1E		

## WELLPATH DATA (129 stations) † = interpolated/extrapolated station

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	DLS [°/100ft]
0.00†	0.000	339.510	0.00	0.00	0.00	0.00	0.00
26.00	0.000	339.510	26.00	0.00	0.00	0.00	0.00
100.00	0.430	339.510	100.00	-0.21	0.26	-0.10	0.58
200.00	0.520	307.740	200.00	-0.95	0.89	-0.59	0.27
300.00	0.960	302.200	299.99	-2.23	1.61	-1.66	0.45
400.00	0.630	301.920	399.98	-3.62	2.35	-2.83	0.33
500.00	0.180	314.610	499.97	-4.32	2.75	-3.41	0.46
600.00	0.040	257.970	599.97	-4.49	2.85	-3.56	0.16
700.00	0.070	289.400	699.97	-4.58	2.87	-3.65	0.04
800.00	0.040	265.790	799.97	-4.67	2.89	-3.74	0.04
900.00	0.070	224.450	899.97	-4.72	2.84	-3.82	0.05
1000.00	0.110	215.970	999.97	-4.74	2.72	-3.92	0.04
1100.00	0.160	198.450	1099.97	-4.73	2.51	-4.02	0.06
1200.00	0.060	197.310	1199.97	-4.69	2.33	-4.08	0.10
1300.00	0.110	187.520	1299.97	-4.65	2.18	-4.10	0.05
1400.00	0.090	203.270	1399.97	-4.60	2.01	-4.15	0.03
1500.00	0.060	188.510	1499.97	-4.58	1.89	-4.19	0.04
1600.00	0.100	165.240	1599.97	-4.50	1.75	-4.17	0.05
1700.00	0.070	199.430	1699.97	-4.43	1.61	-4.17	0.06
1800.00	0.060	190.780	1799.97	-4.40	1.50	-4.20	0.01
1900.00	0.120	352.370	1899.97	-4.45	1.55	-4.22	0.18
2000.00	0.030	200.460	1999.97	-4.51	1.63	-4.25	0.15
2100.00	0.100	48.400	2099.97	-4.47	1.67	-4.19	0.13
2200.00	0.120	17.480	2199.97	-4.47	1.82	-4.09	0.06
2300.00	0.090	140.260	2299.97	-4.41	1.86	-4.01	0.18
2400.00	0.040	344.810	2399.97	-4.36	1.84	-3.97	0.13
2500.00	0.040	4.190	2499.97	-4.40	1.91	-3.98	0.01
2600.00	0.050	190.470	2599.97	-4.40	1.90	-3.98	0.09
2700.00	0.110	193.310	2699.97	-4.36	1.76	-4.01	0.06
2800.00	0.130	177.900	2799.97	-4.28	1.55	-4.03	0.04
2900.00	0.120	193.300	2899.97	-4.19	1.34	-4.05	0.03
3000.00	0.130	212.530	2999.97	-4.17	1.14	-4.14	0.04
3100.00	0.130	222.650	3099.97	-4.20	0.96	-4.27	0.02
3200.00	0.170	355.720	3199.97	-4.31	1.03	-4.36	0.28
3300.00	0.280	347.050	3299.97	-4.56	1.41	-4.43	0.11
3400.00	0.060	121.010	3399.97	-4.67	1.62	-4.44	0.32
3500.00	0.100	167.690	3499.97	-4.56	1.51	-4.37	0.07
3600.00	0.180	168.860	3599.97	-4.40	1.27	-4.33	0.08
3700.00	0.140	212.690	3699.97	-4.31	1.02	-4.36	0.13
3800.00	0.310	266.720	3799.97	-4.54	0.90	-4.70	0.25
3900.00	0.460	276.360	3899.97	-5.14	0.93	-5.37	0.16
4000.00	0.440	258.610	3999.96	-5.80	0.90	-6.14	0.14
4100.00	0.050	52.830	4099.96	-6.08	0.85	-6.48	0.49
4200.00	0.160	10.480	4199.96	-6.10	1.01	-6.42	0.13
4300.00	0.130	344.250	4299.96	-6.23	1.26	-6.43	0.07

# Actual Wellpath Report

Wolverine Providence Federal 24-1\_awp

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INTEQ

## REFERENCE WELLPATH IDENTIFICATION

Operator	WOLVERINE GAS & OIL COMPANY	Slot	Wolverine Providence Federal 24-1
Area	UTAH	Well	Wolverine Providence Federal 24-1
Field	Sanpete County	Wellbore	Wolverine Providence Federal 24-1
Facility	SEC.24-T20S-R1E		

## WELLPATH DATA (129 stations)

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	DLS [°/100ft]
4400.00	0.200	103.890	4399.96	-6.14	1.32	-6.29	0.29
4500.00	0.250	70.190	4499.96	-5.83	1.36	-5.92	0.14
4600.00	0.250	65.550	4599.96	-5.55	1.52	-5.51	0.02
4700.00	0.260	32.290	4699.96	-5.41	1.80	-5.19	0.15
4800.00	0.210	341.130	4799.96	-5.54	2.17	-5.13	0.21
4900.00	0.180	322.090	4899.96	-5.82	2.46	-5.29	0.07
5000.00	0.200	319.410	4999.96	-6.13	2.72	-5.50	0.02
5100.00	0.070	178.280	5099.96	-6.26	2.79	-5.61	0.26
5200.00	0.120	154.240	5199.96	-6.14	2.64	-5.56	0.06
5300.00	0.280	111.460	5299.96	-5.81	2.45	-5.29	0.21
5400.00	0.740	111.160	5399.95	-4.93	2.13	-4.46	0.46
5500.00	1.380	117.260	5499.93	-3.09	1.35	-2.78	0.65
5600.00	0.580	116.850	5599.92	-1.38	0.57	-1.26	0.80
5700.00	0.080	93.350	5699.92	-0.81	0.33	-0.74	0.51
5800.00	0.070	97.620	5799.92	-0.69	0.32	-0.61	0.01
5900.00	0.090	73.700	5899.92	-0.58	0.33	-0.48	0.04
6000.00	0.070	61.750	5999.92	-0.49	0.39	-0.35	0.03
6100.00	0.100	130.240	6099.92	-0.37	0.36	-0.23	0.10
6200.00	0.090	345.150	6199.92	-0.34	0.38	-0.18	0.18
6300.00	0.170	36.510	6299.92	-0.38	0.57	-0.11	0.13
6400.00	0.020	267.890	6399.92	-0.37	0.69	-0.04	0.18
6500.00	0.040	312.580	6499.92	-0.42	0.71	-0.08	0.03
6600.00	0.030	292.350	6599.92	-0.48	0.75	-0.13	0.02
6700.00	0.100	217.850	6699.92	-0.52	0.69	-0.21	0.10
6800.00	0.110	124.930	6799.92	-0.44	0.57	-0.19	0.15
6900.00	0.260	101.160	6899.92	-0.13	0.47	0.12	0.17
7000.00	1.180	92.300	6999.91	1.01	0.38	1.37	0.92
7100.00	2.120	104.740	7099.86	3.72	-0.13	4.18	1.00
7200.00	1.440	93.720	7199.82	6.65	-0.68	7.23	0.76
7300.00	0.780	16.870	7299.80	7.64	-0.11	8.68	1.47
7400.00	1.490	351.630	7399.78	6.70	1.82	8.69	0.85
7500.00	1.970	337.050	7499.74	4.56	4.69	7.83	0.65
7600.00	1.530	330.110	7599.69	2.06	7.43	6.49	0.49
7700.00	0.090	303.350	7699.68	0.83	8.63	5.76	1.45
7800.00	0.150	106.990	7799.68	0.88	8.64	5.82	0.24
7900.00	0.070	173.450	7899.68	1.05	8.54	5.95	0.14
8000.00	0.200	148.790	7999.68	1.24	8.33	6.05	0.14
8100.00	1.770	113.300	8099.66	2.92	7.57	7.56	1.61
8200.00	5.850	103.260	8199.42	9.37	5.79	13.94	4.12
8300.00	4.960	100.030	8298.97	18.35	3.87	23.16	0.94
8400.00	3.650	98.170	8398.69	25.41	2.66	30.57	1.32
8500.00	2.540	101.010	8498.54	30.49	1.79	35.89	1.12
8600.00	1.540	113.520	8598.48	33.94	0.83	39.30	1.09
8700.00	0.120	46.280	8698.46	35.31	0.36	40.61	1.50
8800.00	0.040	315.880	8798.46	35.30	0.46	40.66	0.13



# Actual Wellpath Report

Wolverine Providence Federal 24-1\_awp

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INTEQ

## REFERENCE WELLPATH IDENTIFICATION

Operator	WOLVERINE GAS & OIL COMPANY	Slot	Wolverine Providence Federal 24-1
Area	UTAH	Well	Wolverine Providence Federal 24-1
Field	Sanpete County	Wellbore	Wolverine Providence Federal 24-1
Facility	SEC.24-T20S-R1E		

## WELLPATH DATA (129 stations)

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	DLS [°/100ft]
8900.00	0.090	343.230	8898.46	35.21	0.56	40.61	0.06
9000.00	0.690	141.950	8998.46	35.71	0.16	40.96	0.77
9100.00	0.350	128.500	9098.46	36.57	-0.50	41.57	0.36
9200.00	0.080	177.360	9198.46	36.91	-0.76	41.81	0.30
9300.00	0.030	226.110	9298.46	36.94	-0.85	41.80	0.06
9400.00	0.100	0.380	9398.46	36.89	-0.78	41.78	0.12
9500.00	0.150	113.450	9498.46	36.97	-0.75	41.90	0.21
9600.00	0.140	175.240	9598.46	37.17	-0.92	42.03	0.15
9700.00	0.060	157.100	9698.46	37.28	-1.09	42.06	0.09
9800.00	0.040	258.380	9798.46	37.30	-1.14	42.05	0.08
9900.00	0.040	215.780	9898.46	37.27	-1.18	41.99	0.03
10000.00	0.070	60.490	9998.46	37.29	-1.18	42.02	0.11
10100.00	0.110	34.890	10098.46	37.34	-1.07	42.13	0.06
10200.00	0.120	15.440	10198.46	37.32	-0.89	42.22	0.04
10300.00	0.080	87.690	10298.46	37.35	-0.79	42.31	0.12
10400.00	0.020	303.310	10398.46	37.40	-0.77	42.37	0.10
10500.00	0.240	108.070	10498.46	37.59	-0.83	42.55	0.26
10600.00	0.320	80.010	10598.45	38.01	-0.85	43.03	0.16
10700.00	0.140	121.330	10698.45	38.35	-0.86	43.41	0.23
10800.00	1.240	107.120	10798.44	39.53	-1.24	44.54	1.10
10900.00	1.880	110.920	10898.41	42.21	-2.15	47.11	0.65
11000.00	0.680	128.510	10998.38	44.42	-3.10	49.11	1.25
11100.00	0.550	117.650	11098.37	45.48	-3.69	50.00	0.17
11200.00	1.630	112.770	11198.36	47.38	-4.47	51.73	1.08
11300.00	4.240	109.180	11298.22	52.43	-6.23	56.54	2.62
11400.00	2.900	111.470	11398.02	58.58	-8.37	62.38	1.35
11500.00	0.530	152.210	11497.97	61.48	-9.71	64.95	2.52
11600.00	0.950	255.690	11597.96	61.26	-10.32	64.37	1.19
11700.00	3.370	243.230	11697.89	59.01	-11.85	60.94	2.45
11800.00	4.170	199.970	11797.69	57.94	-16.59	57.07	2.88
11900.00	4.440	180.940	11897.41	60.34	-23.88	55.77	1.45
12000.00	5.430	135.480	11997.07	66.71	-31.13	59.02	3.92
12100.00	4.170	128.510	12096.72	74.84	-36.77	65.18	1.39
12200.00	1.740	123.380	12196.58	79.94	-39.86	69.30	2.44
12300.00	0.080	262.250	12296.57	81.40	-40.71	70.50	1.80
12400.00	0.220	44.170	12396.57	81.39	-40.58	70.56	0.29
12500.00	0.520	0.440	12496.57	81.22	-39.99	70.70	0.39
12600.00	0.230	343.490	12596.56	80.86	-39.34	70.64	0.31
12620.99	0.100	286.200	12617.55	80.81	-39.30	70.61	0.93

# Actual Wellpath Report

Wolverine Providence Federal 24-1\_awp

Page 5 of 5



INTEQ

## REFERENCE WELLPATH IDENTIFICATION

Operator	WOLVERINE GAS & OIL COMPANY	Slot	Wolverine Providence Federal 24-1
Area	UTAH	Well	Wolverine Providence Federal 24-1
Field	Sanpete County	Wellbore	Wolverine Providence Federal 24-1
Facility	SEC.24-T20S-R1E		

## HOLE & CASING SECTIONS

Ref Wellbore: Wolverine Providence Federal 24-1

Ref Wellpath: Wolverine Providence Federal 24-1\_awp

String/Diameter	Start MD [ft]	End MD [ft]	Interval [ft]	Start TVD [ft]	End TVD [ft]	Start N/S [ft]	Start E/W [ft]	End N/S [ft]	End E/W [ft]
20in Conductor	0.00	146.00	146.00	0.00	146.00	0.00	0.00	0.57	-0.27
13.375in Casing Surface	26.00	2017.00	1991.00	26.00	2016.97	0.00	0.00	1.63	-4.25
9.625in Casing Intermediate	26.00	10372.00	10346.00	26.00	10370.46	0.00	0.00	-0.78	42.37
7in Casing Production	26.00	12620.00	12594.00	26.00	12616.56	0.00	0.00	-39.30	70.62

## WELLPATH COMPOSITION

Ref Wellbore: Wolverine Providence Federal 24-1

Ref Wellpath: Wolverine Providence Federal 24-1\_awp

Start MD [ft]	End MD [ft]	Positional Uncertainty Model	Log Name/Comment	Wellbore
26.00	12620.99	Generic gyro - northseeking (Standard)	GYRO	Wolverine Providence Federal 24-1

<b>STATE OF UTAH</b> DEPARTMENT OF NATURAL RESOURCES DIVISION OF OIL, GAS, AND MINING		<b>FORM 9</b>			
<b>SUNDRY NOTICES AND REPORTS ON WELLS</b>  Do not use this form for proposals to drill new wells, significantly deepen existing wells below current bottom-hole depth, reenter plugged wells, or to drill horizontal laterals. Use APPLICATION FOR PERMIT TO DRILL form for such proposals.		<b>5. LEASE DESIGNATION AND SERIAL NUMBER:</b> UTU-80907			
<b>1. TYPE OF WELL</b> Oil Well		<b>6. IF INDIAN, ALLOTTEE OR TRIBE NAME:</b>			
<b>2. NAME OF OPERATOR:</b> WOLVERINE GAS & OIL COMPANY OF UTAH, LLC		<b>7. UNIT or CA AGREEMENT NAME:</b> WOLVERINE			
<b>3. ADDRESS OF OPERATOR:</b> One Riverfront Plaza 55 Campau NW, Grand Rapids, MI, 49503		<b>8. WELL NAME and NUMBER:</b> WOLV FED ARAPIEN VLY 24-1			
<b>4. LOCATION OF WELL</b> <b>FOOTAGES AT SURFACE:</b> 2331 FNL 0549 FWL <b>QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN:</b> Qtr/Qtr: SWNW Section: 24 Township: 20.0S Range: 01.0E Meridian: S		<b>9. API NUMBER:</b> 43039300300000			
<b>PHONE NUMBER:</b> 616 458-1150 Ext		<b>9. FIELD and POOL or WILDCAT:</b> PROVIDENCE			
<b>COUNTY:</b> SANPETE		<b>STATE:</b> UTAH			
<b>11. CHECK APPROPRIATE BOXES TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA</b>					
<b>TYPE OF SUBMISSION</b>	<b>TYPE OF ACTION</b>				
<input checked="" type="checkbox"/> <b>NOTICE OF INTENT</b> Approximate date work will start: 7/10/2010  <input type="checkbox"/> <b>SUBSEQUENT REPORT</b> Date of Work Completion:  <input type="checkbox"/> <b>SPUD REPORT</b> Date of Spud:  <input type="checkbox"/> <b>DRILLING REPORT</b> Report Date:	<table style="width: 100%; border: none;"> <tr> <td style="width: 33%; vertical-align: top;"> <input type="checkbox"/> ACIDIZE  <input type="checkbox"/> CHANGE TO PREVIOUS PLANS  <input type="checkbox"/> CHANGE WELL STATUS  <input type="checkbox"/> DEEPEN  <input type="checkbox"/> OPERATOR CHANGE  <input type="checkbox"/> PRODUCTION START OR RESUME  <input type="checkbox"/> REPERFORATE CURRENT FORMATION  <input type="checkbox"/> TUBING REPAIR  <input type="checkbox"/> WATER SHUTOFF  <input type="checkbox"/> WILDCAT WELL DETERMINATION         </td> <td style="width: 33%; vertical-align: top;"> <input type="checkbox"/> ALTER CASING  <input type="checkbox"/> CHANGE TUBING  <input type="checkbox"/> COMMINGLE PRODUCING FORMATIONS  <input type="checkbox"/> FRACTURE TREAT  <input type="checkbox"/> PLUG AND ABANDON  <input type="checkbox"/> RECLAMATION OF WELL SITE  <input type="checkbox"/> SIDETRACK TO REPAIR WELL  <input checked="" type="checkbox"/> VENT OR FLARE  <input type="checkbox"/> SI TA STATUS EXTENSION  <input type="checkbox"/> OTHER         </td> <td style="width: 33%; vertical-align: top;"> <input type="checkbox"/> CASING REPAIR  <input type="checkbox"/> CHANGE WELL NAME  <input type="checkbox"/> CONVERT WELL TYPE  <input type="checkbox"/> NEW CONSTRUCTION  <input type="checkbox"/> PLUG BACK  <input type="checkbox"/> RECOMPLETE DIFFERENT FORMATION  <input type="checkbox"/> TEMPORARY ABANDON  <input type="checkbox"/> WATER DISPOSAL  <input type="checkbox"/> APD EXTENSION            OTHER: Additional Testing/Flaring         </td> </tr> </table>		<input type="checkbox"/> ACIDIZE <input type="checkbox"/> CHANGE TO PREVIOUS PLANS <input type="checkbox"/> CHANGE WELL STATUS <input type="checkbox"/> DEEPEN <input type="checkbox"/> OPERATOR CHANGE <input type="checkbox"/> PRODUCTION START OR RESUME <input type="checkbox"/> REPERFORATE CURRENT FORMATION <input type="checkbox"/> TUBING REPAIR <input type="checkbox"/> WATER SHUTOFF <input type="checkbox"/> WILDCAT WELL DETERMINATION	<input type="checkbox"/> ALTER CASING <input type="checkbox"/> CHANGE TUBING <input type="checkbox"/> COMMINGLE PRODUCING FORMATIONS <input type="checkbox"/> FRACTURE TREAT <input type="checkbox"/> PLUG AND ABANDON <input type="checkbox"/> RECLAMATION OF WELL SITE <input type="checkbox"/> SIDETRACK TO REPAIR WELL <input checked="" type="checkbox"/> VENT OR FLARE <input type="checkbox"/> SI TA STATUS EXTENSION <input type="checkbox"/> OTHER	<input type="checkbox"/> CASING REPAIR <input type="checkbox"/> CHANGE WELL NAME <input type="checkbox"/> CONVERT WELL TYPE <input type="checkbox"/> NEW CONSTRUCTION <input type="checkbox"/> PLUG BACK <input type="checkbox"/> RECOMPLETE DIFFERENT FORMATION <input type="checkbox"/> TEMPORARY ABANDON <input type="checkbox"/> WATER DISPOSAL <input type="checkbox"/> APD EXTENSION OTHER: Additional Testing/Flaring
<input type="checkbox"/> ACIDIZE <input type="checkbox"/> CHANGE TO PREVIOUS PLANS <input type="checkbox"/> CHANGE WELL STATUS <input type="checkbox"/> DEEPEN <input type="checkbox"/> OPERATOR CHANGE <input type="checkbox"/> PRODUCTION START OR RESUME <input type="checkbox"/> REPERFORATE CURRENT FORMATION <input type="checkbox"/> TUBING REPAIR <input type="checkbox"/> WATER SHUTOFF <input type="checkbox"/> WILDCAT WELL DETERMINATION	<input type="checkbox"/> ALTER CASING <input type="checkbox"/> CHANGE TUBING <input type="checkbox"/> COMMINGLE PRODUCING FORMATIONS <input type="checkbox"/> FRACTURE TREAT <input type="checkbox"/> PLUG AND ABANDON <input type="checkbox"/> RECLAMATION OF WELL SITE <input type="checkbox"/> SIDETRACK TO REPAIR WELL <input checked="" type="checkbox"/> VENT OR FLARE <input type="checkbox"/> SI TA STATUS EXTENSION <input type="checkbox"/> OTHER	<input type="checkbox"/> CASING REPAIR <input type="checkbox"/> CHANGE WELL NAME <input type="checkbox"/> CONVERT WELL TYPE <input type="checkbox"/> NEW CONSTRUCTION <input type="checkbox"/> PLUG BACK <input type="checkbox"/> RECOMPLETE DIFFERENT FORMATION <input type="checkbox"/> TEMPORARY ABANDON <input type="checkbox"/> WATER DISPOSAL <input type="checkbox"/> APD EXTENSION OTHER: Additional Testing/Flaring			
<b>12. DESCRIBE PROPOSED OR COMPLETED OPERATIONS. Clearly show all pertinent details including dates, depths, volumes, etc.</b> Wolverine Gas and Oil Company of Utah, LLC has received approval from the Board of Oil, Gas and Mining, Department of Natural Resources, State of Utah to conduct additional testing on the Wolverine Federal Arapien Valley 24-1 and the Providence Federal 24-1. The Board orders provided Wolverine authorization to recompletable and stimulate the Arapien Valley 24-1 and the Providence Federal 24-4 and test each well for an additional six month period with flaring and venting of associated oil well gas, provided the aggregate volume of gas so flared from both wells does not exceed 360,000 MCF for the authorized test period/production period. This Sundry requests approval from UDOGM to accomplish the Board-approved activities and additional testing and flaring.					
<b>Accepted by the Utah Division of Oil, Gas and Mining</b>  Date: <u>July 19, 2010</u> By: <u>[Signature]</u>					
<b>NAME (PLEASE PRINT)</b> Helene Bardolph	<b>PHONE NUMBER</b> 616 458-1150	<b>TITLE</b> Engineering Administrative Assistant			
<b>SIGNATURE</b> N/A	<b>DATE</b> 7/6/2010				

**RECEIVED** July 06, 2010

<b>STATE OF UTAH</b> DEPARTMENT OF NATURAL RESOURCES DIVISION OF OIL, GAS, AND MINING		<b>FORM 9</b>
<b>SUNDRY NOTICES AND REPORTS ON WELLS</b>  Do not use this form for proposals to drill new wells, significantly deepen existing wells below current bottom-hole depth, reenter plugged wells, or to drill horizontal laterals. Use APPLICATION FOR PERMIT TO DRILL form for such proposals.		<b>5. LEASE DESIGNATION AND SERIAL NUMBER:</b> UTU-80907
<b>1. TYPE OF WELL</b> Oil Well		<b>6. IF INDIAN, ALLOTTEE OR TRIBE NAME:</b>
<b>2. NAME OF OPERATOR:</b> WOLVERINE GAS & OIL COMPANY OF UTAH, LLC		<b>7. UNIT or CA AGREEMENT NAME:</b> WOLVERINE
<b>3. ADDRESS OF OPERATOR:</b> One Riverfront Plaza 55 Campau NW, Grand Rapids, MI, 49503		<b>8. WELL NAME and NUMBER:</b> WOLV FED ARAPIEN VLY 24-1
<b>4. LOCATION OF WELL</b> <b>FOOTAGES AT SURFACE:</b> 2331 FNL 0549 FWL <b>QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN:</b> Qtr/Qtr: SWNW Section: 24 Township: 20.0S Range: 01.0E Meridian: S		<b>9. API NUMBER:</b> 43039300300000
<b>PHONE NUMBER:</b> 616 458-1150 Ext		<b>9. FIELD and POOL or WILDCAT:</b> PROVIDENCE
<b>COUNTY:</b> SANPETE		<b>STATE:</b> UTAH

11. CHECK APPROPRIATE BOXES TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA

TYPE OF SUBMISSION	TYPE OF ACTION		
<input type="checkbox"/> <b>NOTICE OF INTENT</b> Approximate date work will start:	<input type="checkbox"/> ACIDIZE <input type="checkbox"/> CHANGE TO PREVIOUS PLANS <input type="checkbox"/> CHANGE WELL STATUS <input type="checkbox"/> DEEPEN <input type="checkbox"/> OPERATOR CHANGE <input type="checkbox"/> PRODUCTION START OR RESUME <input type="checkbox"/> REPERFORATE CURRENT FORMATION <input type="checkbox"/> TUBING REPAIR <input type="checkbox"/> WATER SHUTOFF <input type="checkbox"/> WILDCAT WELL DETERMINATION	<input type="checkbox"/> ALTER CASING <input type="checkbox"/> CHANGE TUBING <input type="checkbox"/> COMMINGLE PRODUCING FORMATIONS <input checked="" type="checkbox"/> FRACTURE TREAT <input type="checkbox"/> PLUG AND ABANDON <input type="checkbox"/> RECLAMATION OF WELL SITE <input type="checkbox"/> SIDETRACK TO REPAIR WELL <input type="checkbox"/> VENT OR FLARE <input type="checkbox"/> SI TA STATUS EXTENSION <input type="checkbox"/> OTHER	<input type="checkbox"/> CASING REPAIR <input type="checkbox"/> CHANGE WELL NAME <input type="checkbox"/> CONVERT WELL TYPE <input type="checkbox"/> NEW CONSTRUCTION <input checked="" type="checkbox"/> PLUG BACK <input type="checkbox"/> RECOMPLETE DIFFERENT FORMATION <input type="checkbox"/> TEMPORARY ABANDON <input type="checkbox"/> WATER DISPOSAL <input type="checkbox"/> APD EXTENSION OTHER: <input type="text" value="Recomplete"/>
<input checked="" type="checkbox"/> <b>SUBSEQUENT REPORT</b> Date of Work Completion: 8/6/2010			
<input type="checkbox"/> <b>SPUD REPORT</b> Date of Spud:			
<input type="checkbox"/> <b>DRILLING REPORT</b> Report Date:			

12. DESCRIBE PROPOSED OR COMPLETED OPERATIONS. Clearly show all pertinent details including dates, depths, volumes, etc.  
 Revised Sundry: Please see attached document for additional details not included on BLM Sundry notice filed 12/2/2010.

**Accepted by the**  
**Utah Division of**  
**Oil, Gas and Mining**  
**FOR RECORD ONLY**

<b>NAME (PLEASE PRINT)</b> Helene Bardolph	<b>PHONE NUMBER</b> 616 458-1150	<b>TITLE</b> Engineering Administrative Assistant
<b>SIGNATURE</b> N/A	<b>DATE</b> 12/13/2010	

Wolverine Federal Arapien Valley 24-1:

BLM Sundry Notice

Type of Submission: Subsequent Report  
Type of Action: Fracture Treat, Plug Back, Recomplete  
Date of Work Start: 7/9/2010  
Date of Work Completion: 8/6/2010

Details:

The Wolverine Federal Arapien Valley 24-1 was plugged back to 9,245' to abandon the Navajo 2 interval and perforated at 8998' -9020' with 6 spf in the Navajo 1 pay interval. A fracture stimulation was pumped into the new perforation interval with a planned volume of 26,000 gallons of fluid, 10,000 lbs of 100 mesh proppant, and 60,000 lbs of 20/40 mesh bauxite proppant. Prior to the fracture treatment a Differential Fracture Injection Test (DFIT) was pumped with 1100 gallons of 2% KCL brine at an average rate of 3.8 BPM and average pressure of 3,382 psi. Early screen-out occurred during the treatment and a total of 27,000 lbs of proppant were placed into the formation with a maximum rate of 25.1 BPM and maximum treating pressure of 8,469 psi. Coiled tubing was run in hole and the wellbore was flushed out to begin flowback for rate and clean up. A packer and production tubing were set and the well was put on production. Currently, the well is flowing at an average daily rate of 201 BOPD, 26 BWPD & 2.4 MMCFD.

UNITED STATES  
DEPARTMENT OF THE INTERIOR  
BUREAU OF LAND MANAGEMENT

FORM APPROVED  
OMB No. 1004-0137  
Expires: March 31, 2007

**SUNDRY NOTICES AND REPORTS ON WELLS**

**Do not use this form for proposals to drill or to re-enter an abandoned well. Use Form 3160-3 (APD) for such proposals.**

**SUBMIT IN TRIPLICATE- Other instructions on reverse side.**


1. Type of Well <input checked="" type="checkbox"/> Oil Well <input type="checkbox"/> Gas Well <input type="checkbox"/> Other		5. Lease Serial No. <b>UTU-80907</b>
2. Name of Operator <b>Wolverine Gas and Oil Company of Utah, LLC</b>		6. If Indian, Allottee or Tribe Name <b>NA</b>
3a. Address <b>55 Campau NW, Grand Rapids, MI 49503</b>	3b. Phone No. (include area code) <b>616-458-1150</b>	7. If Unit or CA/Agreement, Name and/or No. <b>Wolverine Unit</b>
4. Location of Well (Footage, Sec., T., R., M., or Survey Description) <b>2331' FNL, 549' FWL, Sec. 24, T20S, R1E, SLB&amp;M</b>		8. Well Name and No. <b>Wolverine Federal Arapien Valley 24-1</b>
		9. API Well No. <b>43-039-30030</b>
		10. Field and Pool, or Exploratory Area <b>Wildcat</b>
		11. County or Parish, State <b>Sanpete County, Utah</b>

**12. CHECK APPROPRIATE BOX(ES) TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA**

TYPE OF SUBMISSION	TYPE OF ACTION			
<input type="checkbox"/> Notice of Intent	<input type="checkbox"/> Acidize	<input type="checkbox"/> Deepen	<input type="checkbox"/> Production (Start/Resume)	<input type="checkbox"/> Water Shut-Off
<input checked="" type="checkbox"/> Subsequent Report	<input type="checkbox"/> Alter Casing	<input type="checkbox"/> Fracture Treat	<input type="checkbox"/> Reclamation	<input type="checkbox"/> Well Integrity
<input type="checkbox"/> Final Abandonment Notice	<input type="checkbox"/> Casing Repair	<input type="checkbox"/> New Construction	<input type="checkbox"/> Recomplete	<input checked="" type="checkbox"/> Other Activity Update
	<input type="checkbox"/> Change Plans	<input type="checkbox"/> Plug and Abandon	<input type="checkbox"/> Temporarily Abandon	
	<input type="checkbox"/> Convert to Injection	<input type="checkbox"/> Plug Back	<input type="checkbox"/> Water Disposal	

13. Describe Proposed or Completed Operation (clearly state all pertinent details, including estimated starting date of any proposed work and approximate duration thereof. If the proposal is to deepen directionally or recompleat horizontally, give subsurface locations and measured and true vertical depths of all pertinent markers and zones. Attach the Bond under which the work will be performed or provide the Bond No. on file with BLM/BIA. Required subsequent reports shall be filed within 30 days following completion of the involved operations. If the operation results in a multiple completion or recompleat in a new interval, a Form 3160-4 shall be filed once testing has been completed. Final Abandonment Notices shall be filed only after all requirements, including reclamation, have been completed, and the operator has determined that the site is ready for final inspection.)

The Wolverine Federal Arapien Valley 24-1 was shut-in for a pressure build up analysis on February 22, 2011 which concluded 202 days of testing while producing 37,781 BO and 438 MMCF of gas. Two pressure bombs were lowered into the well prior to shut-in and will be removed from the well after 450 hours of shut-in time. The well will remain shut-in indefinitely until Wolverine completes its analysis of the testing and build up data and presents it to the Board of Oil, Gas and Mining. At this point the Board will make its determination regarding the associated oil well gas. The tubing and packer will also be pulled in the near future for inspection and to repair a leak in the packer. Attached is the production data covering the duration of the permitted testing period.

14. I hereby certify that the foregoing is true and correct Name (Printed/Typed) <b>Matthew Rivers</b>		Title <b>Production Engineer</b>
Signature 		Date <b>03/10/2011</b>

**THIS SPACE FOR FEDERAL OR STATE OFFICE USE**

Approved by _____ Conditions of approval, if any, are attached. Approval of this notice does not warrant or certify that the applicant holds legal or equitable title to those rights in the subject lease which would entitle the applicant to conduct operations thereon.	Title _____ Office _____	Date _____
--	-----------------------------	------------

Title 18 U.S.C. Section 1001 and Title 43 U.S.C. Section 1212, make it a crime for any person knowingly and willfully to make to any department or agency of the United States any false, fictitious or fraudulent statements or representations as to any matter within its jurisdiction.

(Instructions on page 2)

**RECEIVED**  
**MAR 14 2011**  
**DIV. OF OIL, GAS & MINING**



## GENERAL INSTRUCTIONS

This form is designed for submitting proposals to perform certain well operations, and reports of such operations when completed, as indicated on Federal and Indian lands pursuant to applicable Federal law and regulations. Any necessary special instructions concerning the use of this

form and the number of copies to be submitted, particularly with regard to local area, or regional procedures and practices, either are shown below or will be issued by, or may be obtained from the local Federal office.

## SPECIFIC INSTRUCTIONS

*Item 4* - Locations on Federal or Indian land should be described in accordance with Federal requirements. Consult the local Federal office for specific instructions.

*Item 13* - Proposals to abandon a well and subsequent reports of abandonment should include such special information as is required by the local Federal office. In addition, such proposals and reports should include reasons for the abandonment; data on any former or

present productive zones, or other zones with present significant fluid contents not sealed off by cement or otherwise; depths (top and bottom) and method of placement of cement plugs; mud or other material placed below, between and above plugs; amount, size, method of parting of any casing, liner or tubing pulled and the depth to top of any left in the hole; method of closing top of well and date well site conditioned for final inspection looking to approval of the abandonment.

## NOTICE

The Privacy Act of 1974 and the regulation in 43 CFR 2.48(d) provide that you be furnished the following information in connection with information required by this application.

**AUTHORITY:** 30 U.S.C. 181 et seq., 351 et seq., 25 U.S.C. 396; 43 CFR 3160.

**PRINCIPAL PURPOSE:** The information is used to: (1) Evaluate, when appropriate, approve applications, and report completion of subsequent well operations, on a Federal or Indian lease; and (2) document for administrative use, information for the management, disposal and use of National Resource lands and resources, such as: (a) evaluating the equipment and procedures to be used during a proposed subsequent well operation and reviewing the completed well operations for compliance with the approved plan; (b) requesting and granting approval to perform those actions covered by 43 CFR 3162.3-2, 3162.3-3, and 3162.3-4; (c) reporting the beginning or resumption of production, as required by 43 CFR 3162.4-1(c) and (d) analyzing future applications to drill or modify operations in light of data obtained and methods used.

**ROUTINE USES:** Information from the record and/or the record will be transferred to appropriate Federal, State, local or foreign agencies, when relevant to civil, criminal or regulatory investigations or prosecutions in connection with congressional inquiries or to consumer reporting agencies to facilitate collection of debts owed the Government.

**EFFECT OF NOT PROVIDING THE INFORMATION:** Filing of this notice and report and disclosure of the information is mandatory for those subsequent well operations specified in 43 CFR 3162.3-2, 3162.3-3, 3162.3-4.

The Paperwork Reduction Act of 1995 requires us to inform you that:

This information is being collected to evaluate proposed and/or completed subsequent well operations on Federal or Indian oil and gas leases.

Response to this request is mandatory.

BLM would like you to know that you do not have to respond to this or any other Federal agency-sponsored information collection unless it displays a currently valid OMB control number.

## BURDEN HOURS STATEMENT

Public reporting burden for this form is estimated to average 25 minutes per response, including the time for reviewing instructions, gathering and maintaining data, and completing and reviewing the form. Direct comments regarding the burden estimate or any other aspect of this form to U.S. Department of the Interior, Bureau of Land Management (1004-0137), Bureau Information Collection Clearance Officer, (WO-630), Mail Stop 401 LS, 1849 C St., N.W., Washington D.C. 20240

**Wolverine Federal Arapien Valley 24-1**

FieldName	Date	Oil	Water	Gas	Total Fluid	Water-Cut	GOR	TP	TS	CP	CS	Choke	Run Time	Comments	Cum Oil	Cum Water	Cum Gas
24-01 AV	2/28/2011	0	0	0	0	0%	0	1174	SI	1160	SI	0	0	SI for PBU	37,781	5,272	437,859
24-01 AV	2/27/2011	0	0	0	0	0%	0	1172	SI	1160	SI	0	0	SI for PBU	37,781	5,272	437,859
24-01 AV	2/26/2011	0	0	0	0	0%	0	1172	SI	1150	SI	0	0	SI for PBU	37,781	5,272	437,859
24-01 AV	2/25/2011	0	0	0	0	0%	0	1172	SI	1150	SI	0	0	SI for PBU	37,781	5,272	437,859
24-01 AV	2/24/2011	0	0	0	0	0%	0	1172	SI	1150	SI	0	0		37,781	5,272	437,859
24-01 AV	2/23/2011	0	0	0	0	0%	0	1173	SI	1150	SI	23	0	SI for PBU	37,781	5,272	437,859
24-01 AV	2/22/2011	38.37	6.23	602	45	14%	15689	1028	F	1090	SI	23	5.5	SI for PBU	37,781	5,272	437,859
24-01 AV	2/21/2011	166.57	41.63	1998	208	20%	11995	935	F	1050	SI	23	21		37,743	5,266	437,257
24-01 AV	2/20/2011	187.87	36.64	2288	225	16%	12179	928	F	1050	SI	23	24		37,577	5,224	435,259
24-01 AV	2/19/2011	213.21	29.37	2371	243	12%	11120	930	F	1050	SI	23	24		37,389	5,187	432,971
24-01 AV	2/18/2011	195.76	37.03	2363	233	16%	12071	931	F	1050	SI	23	24		37,175	5,158	430,600
24-01 AV	2/17/2011	201.23	31.64	2363	233	14%	11743	931	F	1050	SI	23	24		36,980	5,121	428,237
24-01 AV	2/16/2011	189.89	43.3	2373	233	19%	12497	932	F	1050	SI	24	24		36,778	5,089	425,874
24-01 AV	2/15/2011	202.84	34.98	2416	238	15%	11911	925	F	1050	SI	24	24		36,589	5,046	423,501
24-01 AV	2/14/2011	203.78	36.69	2419	240	15%	11871	924	F	1050	SI	24	24		36,386	5,011	421,085
24-01 AV	2/13/2011	204.03	39.98	2423	244	16%	11876	925	F	1050	SI	24	24		36,182	4,974	418,666
24-01 AV	2/12/2011	189.09	51.68	2427	241	21%	12835	925	F	1050	SI	24	24		35,978	4,934	416,243
24-01 AV	2/11/2011	205.49	26.69	2427	232	11%	11811	926	F	1050	SI	24	24		35,789	4,883	413,816
24-01 AV	2/10/2011	195.72	43.29	2431	239	18%	12421	927	F	1050	SI	24	24		35,583	4,856	411,389
24-01 AV	2/9/2011	202.81	41.68	2438	244	17%	12021	926	F	1050	SI	24	24		35,388	4,813	408,958
24-01 AV	2/8/2011	197.87	30.44	2460	228	13%	12432	928	F	1050	SI	24	24		35,185	4,771	406,520
24-01 AV	2/7/2011	200.81	59.95	2465	261	23%	12275	925	F	1050	SI	24	24		34,987	4,741	404,060
24-01 AV	2/6/2011	196.53	41.63	2461	238	17%	12522	929	F	1050	SI	24	24		34,786	4,681	401,595
24-01 AV	2/5/2011	206.64	33.31	2476	240	14%	11982	932	F	1050	SI	24	24		34,590	4,639	399,134
24-01 AV	2/4/2011	197.85	46.67	2490	245	19%	12585	932	F	1050	SI	24	24		34,383	4,606	396,658
24-01 AV	2/3/2011	201.53	40.01	2490	242	17%	12355	934	F	1050	SI	24	24		34,185	4,559	394,168
24-01 AV	2/2/2011	204.53	33.4	2499	238	14%	12218	934	F	1050	SI	24	24		33,984	4,519	391,678
24-01 AV	2/1/2011	193.29	49.64	2314	243	20%	11972	936	F	1050	SI	23	24		33,779	4,486	389,179
24-01 AV	1/31/2011	214.48	31.61	2448	246	13%	11414	942	F	1050	SI	23	24		33,586	4,436	386,865
24-01 AV	1/30/2011	207.43	35.01	2451	242	14%	11816	939	F	1050	SI	23	24		33,371	4,404	384,417
24-01 AV	1/29/2011	184.9	45.08	2450	230	20%	13250	940	F	1050	SI	23	24		33,164	4,369	381,966
24-01 AV	1/28/2011	188.28	43.57	2452	232	19%	13023	941	F	1050	SI	23	24		32,979	4,324	379,516
24-01 AV	1/27/2011	218.76	25.01	2451	244	10%	11204	942	F	1050	SI	23	24		32,791	4,281	377,064
24-01 AV	1/26/2011	202.83	31.67	2452	235	14%	12089	940	F	1050	SI	23	24		32,572	4,256	374,613
24-01 AV	1/25/2011	187.84	46.71	2456	235	20%	13075	944	F	1050	SI	23	24		32,369	4,224	372,161
24-01 AV	1/24/2011	215.37	21.29	2460	237	9%	11422	946	F	1050	SI	23	24		32,181	4,177	369,705
24-01 AV	1/23/2011	197.43	34.99	2400	232	15%	12156	944	F	1020	SI	23	24		31,966	4,156	367,245
24-01 AV	1/22/2011	203.2	35.01	2417	238	15%	11895	929	F	1020	SI	23	24		31,768	4,121	364,845
24-01 AV	1/21/2011	209.57	34.01	2424	244	14%	11567	930	F	1020	SI	23	24		31,565	4,086	362,428
24-01 AV	1/20/2011	185.77	35.81	2433	222	16%	13097	931	F	1030	SI	23	24		31,356	4,052	360,004
24-01 AV	1/19/2011	199.44	35.25	2446	235	15%	12264	933	F	1000	SI	23	24		31,170	4,016	357,571
24-01 AV	1/18/2011	215.42	33.3	2455	249	13%	11396	932	F	1000	SI	23	24		30,970	3,981	355,125
24-01 AV	1/17/2011	198.67	34.97	2473	234	15%	12448	891	F	1000	SI	25	24		30,755	3,948	352,670
24-01 AV	1/16/2011	200.29	35.01	2423	235	15%	12097	826	F	1000	SI	25	24		30,556	3,913	350,197
24-01 AV	1/15/2011	199.96	30	2435	230	13%	12177	827	F	1000	SI	25	24		30,356	3,878	347,774
24-01 AV	1/14/2011	207.84	35.02	2443	243	14%	11754	824	F	1000	SI	25	24		30,156	3,848	345,339
24-01 AV	1/13/2011	186.53	36.75	2448	223	16%	13124	828	F	1000	SI	25	24		29,948	3,813	342,896
24-01 AV	1/12/2011	206.62	29.97	2447	237	13%	11843	829	F	1000	SI	25	24		29,762	3,776	340,448
24-01 AV	1/11/2011	190.34	39.97	2425	230	17%	12740	835	F	1000	SI	24	24		29,555	3,746	338,001
24-01 AV	1/10/2011	199.87	33.32	2428	233	14%	12148	834	F	1000	SI	24	24		29,365	3,706	335,576
24-01 AV	1/9/2011	201.62	26.67	2441	228	12%	12107	839	F	1000	SI	24	24		29,165	3,673	333,148

[illegible]

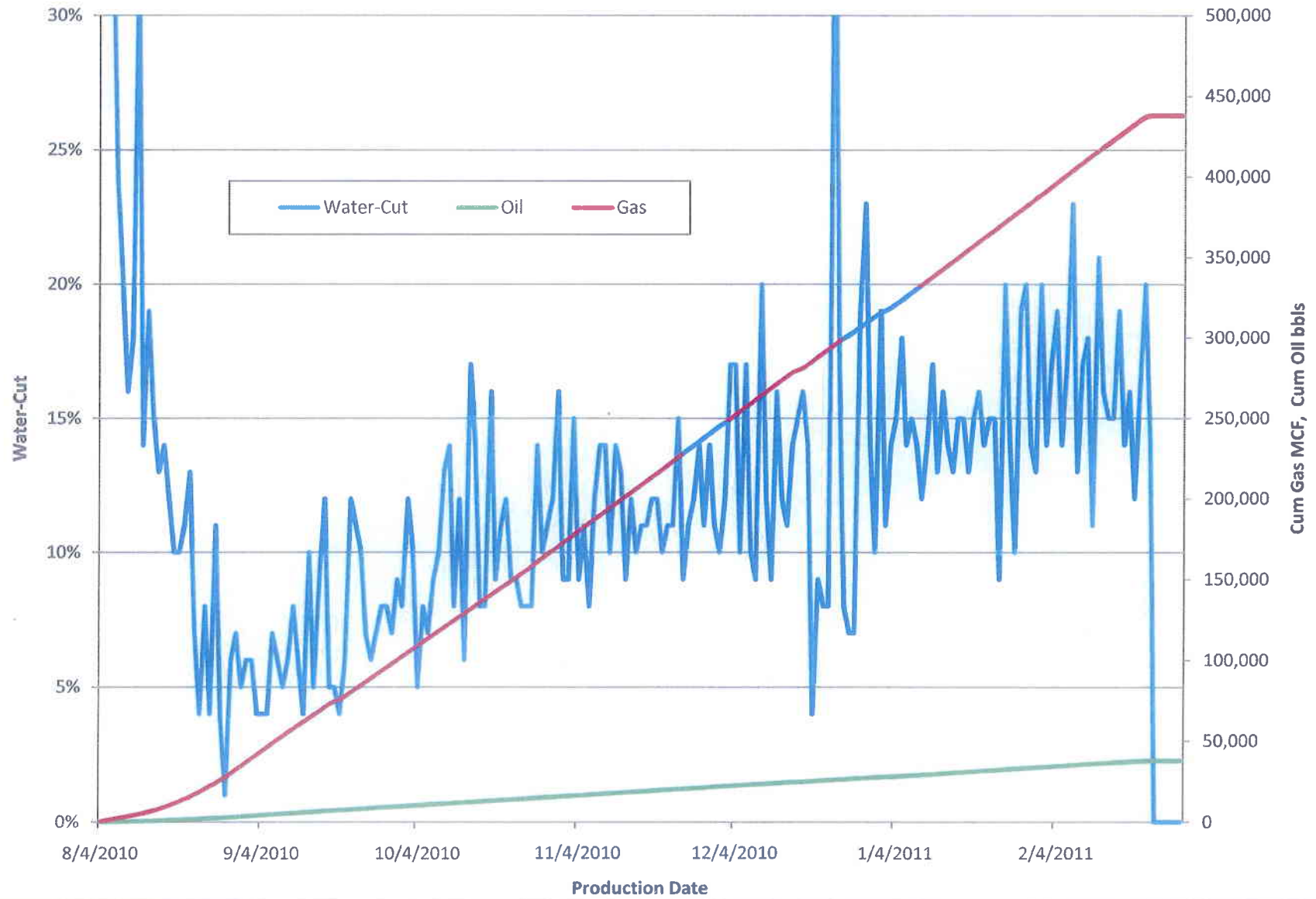
24-01 AV	11/15/2010	199	22	2383	221	10%	11959	917	F	1025	SI	23	24		18,684	2,098	206,550
24-01 AV	11/14/2010	202	27	2389	228	12%	11854	922	F	1025	SI	23	24		18,485	2,076	204,167
24-01 AV	11/13/2010	209	22	2395	231	9%	11448	922	F	1025	SI	23	24		18,283	2,049	201,778
24-01 AV	11/12/2010	183	28	2397	212	13%	13071	922	F	1025	SI	23	24		18,074	2,027	199,383
24-01 AV	11/11/2010	193	32	2404	225	14%	12442	923	F	1025	SI	23	24		17,891	1,999	196,986
24-01 AV	11/10/2010	215	25	2408	240	10%	11179	926	F	1025	SI	23	24		17,698	1,967	194,582
24-01 AV	11/9/2010	170	29	2364	199	14%	13870	928	F	1025	SI	23	23	Down 1 hr for maint.	17,483	1,942	192,174
24-01 AV	11/8/2010	186	30	2424	216	14%	13019	926	F	1025	SI	23	24		17,313	1,913	189,810
24-01 AV	11/7/2010	205	27	2430	232	12%	11879	930	F	1025	SI	23	24		17,127	1,883	187,386
24-01 AV	11/6/2010	215	20	2432	235	8%	11295	931	F	1025	SI	23	24		16,922	1,856	184,956
24-01 AV	11/5/2010	206	27	2455	233	11%	11905	929	F	1025	SI	23	24		16,707	1,836	182,524
24-01 AV	11/4/2010	210	22	2435	231	9%	11618	935	F	1025	SI	23	24		16,501	1,809	180,069
24-01 AV	11/3/2010	206	37	2477	243	15%	12010	931	F	1025	SI	23	24		16,291	1,787	177,634
24-01 AV	11/2/2010	214	20	2488	234	9%	11631	932	F	1025	SI	23	24		16,085	1,750	175,157
24-01 AV	11/1/2010	227	23	2475	250	9%	10918	932	F	1025	SI	23	24		15,871	1,730	172,669
24-01 AV	10/31/2010	168	32	2188	200	16%	12998	951	F	1025	SI	22	21	SI due to tank room	15,644	1,707	170,194
24-01 AV	10/30/2010	171	23	2219	194	12%	12996	938	F	1025	SI	23	20		15,476	1,675	168,006
24-01 AV	10/29/2010	207	25	2497	232	11%	12060	938	F	1025	SI	23	24		15,305	1,652	165,787
24-01 AV	10/28/2010	215	25	2508	240	10%	11669	938	F	1025	SI	23	24		15,098	1,627	163,290
24-01 AV	10/27/2010	223	37	2545	259	14%	11420	932	F	1025	SI	23	24		14,883	1,602	160,782
24-01 AV	10/26/2010	189	17	2343	206	8%	12383	946	F	1025	SI	23	23	SI for maintenance	14,660	1,565	158,237
24-01 AV	10/25/2010	202	17	2261	218	8%	11216	976	F	1025	SI	21	24		14,471	1,548	155,894
24-01 AV	10/24/2010	193	17	2290	209	8%	11894	973	F	1025	SI	21	24		14,269	1,531	153,633
24-01 AV	10/23/2010	194	20	2277	214	9%	11725	977	F	1025	SI	21	24		14,076	1,514	151,343
24-01 AV	10/22/2010	179	19	2177	198	9%	12131	875	F	1025	SI	21	24		13,882	1,494	149,066
24-01 AV	10/21/2010	195	27	2198	221	12%	11293	979	F	1025	SI	21	23		13,703	1,475	146,889
24-01 AV	10/20/2010	190	23	2216	212	11%	11692	984	F	1025	SI	21	24		13,508	1,448	144,691
24-01 AV	10/19/2010	193	18	2222	212	9%	11500	986	F	1025	SI	21	24		13,318	1,425	142,475
24-01 AV	10/18/2010	176	33	2225	210	16%	12621	986	F	1025	SI	21	24		13,125	1,407	140,253
24-01 AV	10/17/2010	198	18	2233	217	8%	11265	988	F	1025	SI	21	24		12,949	1,374	138,028
24-01 AV	10/16/2010	196	17	2239	213	8%	11407	987	F	1025	SI	21	24		12,751	1,356	135,795
24-01 AV	10/15/2010	172	28	2253	200	14%	13122	998	F	1025	SI	21	24		12,555	1,339	133,556
24-01 AV	10/14/2010	193	40	2187	233	17%	11320	984	F	1025	SI	21	24		12,383	1,311	131,303
24-01 AV	10/13/2010	187	11	2231	198	6%	11952	1000	F	1025	SI	21	24		12,190	1,271	129,116
24-01 AV	10/12/2010	211	28	2269	240	12%	10731	997	F	1000	SI	21	24		12,003	1,260	126,885
24-01 AV	10/11/2010	203	17	2241	220	8%	11024	988	F	1025	SI	21	24		11,792	1,232	124,616
24-01 AV	10/10/2010	177	28	2209	205	14%	12498	994	F	1025	SI	21	24		11,589	1,215	122,375
24-01 AV	10/9/2010	183	27	2208	210	13%	12052	994	F	1025	SI	21	24		11,412	1,187	120,166
24-01 AV	10/8/2010	194	22	2211	216	10%	11387	995	F	1050	SI	21	24		11,229	1,160	117,958
24-01 AV	10/7/2010	194	18	2218	212	9%	11445	996	F	1050	SI	21	24		11,035	1,138	115,747
24-01 AV	10/6/2010	197	15	2240	212	7%	11371	999	F	1025	SI	21	24		10,841	1,120	113,529
24-01 AV	10/5/2010	199	18	2179	218	8%	10937	997	F	1000	SI	20	24		10,644	1,105	111,289
24-01 AV	10/4/2010	202	12	2241	214	5%	11074	994	F	1025	SI	21	24		10,445	1,087	109,110
24-01 AV	10/3/2010	205	22	2246	227	10%	10957	1000	F	1000	SI	21	24		10,243	1,075	106,869
24-01 AV	10/2/2010	190	25	2258	215	12%	11916	996	F	1000	SI	21	24		10,038	1,053	104,623
24-01 AV	10/1/2010	191	17	2275	209	8%	11904	997	F	1000	SI	21	24		9,848	1,028	102,365
24-01 AV	9/30/2010	208	22	2275	230	9%	10926	996	F	1000	SI	21	24		9,657	1,011	100,090
24-01 AV	9/29/2010	209	15	2279	224	7%	10925	998	F	1000	SI	21	24		9,449	989	97,815
24-01 AV	9/28/2010	205	18	2240	223	8%	10920	998	F	1000	SI	21	24		9,240	974	95,536
24-01 AV	9/27/2010	207	18	2261	225	8%	10925	1000	F	1000	SI	21	24		9,035	956	93,296
24-01 AV	9/26/2010	210	15	2251	225	7%	10742	1004	F	1000	SI	21	24		8,828	938	91,035
24-01 AV	9/25/2010	206	13	2252	219	6%	10917	1004	F	1000	SI	21	24		8,618	923	88,784
24-01 AV	9/24/2010	207	15	2288	222	7%	11057	1006	F	1000	SI	21	24		8,412	910	86,532

24-01 AV	9/23/2010	203	22	2210	224	10%	10896	1012	F	1000	SI	21	24		8,205	895	84,244
24-01 AV	9/22/2010	210	25	2265	235	11%	10776	1012	F	1000	SI	21	24		8,002	873	82,034
24-01 AV	9/21/2010	178	23	2273	201	12%	12803	1012	F	1000	SI	21	24		7,792	848	79,769
24-01 AV	9/20/2010	172	10	1766	182	6%	10262	1010	F	1000	SI	21	24		7,614	825	77,496
24-01 AV	9/19/2010	179	8	1326	187	4%	7425	1100	F	1000	SI	21	24		7,442	815	75,730
24-01 AV	9/18/2010	208	12	1425	219	5%	6867	208	F	1000	SI	20	23	Down 1 hour due to high vessel pressure	7,263	807	74,404
24-01 AV	9/17/2010	222	12	2334	234	5%	10515	1002	F	1000	SI	21	24		7,055	795	72,979
24-01 AV	9/16/2010	211	29	2377	240	12%	11250	980	F	1000	SI	21	24		6,833	783	70,645
24-01 AV	9/15/2010	207	20	2121	227	9%	10241						0		6,622	754	68,268
24-01 AV	9/14/2010	212	12	2148	223	5%	10150	1019	F	1000	SI	20	24		6,415	734	66,147
24-01 AV	9/13/2010	205	24	2157	229	10%	10499	1022	F	1000	SI	20	24		6,203	722	63,999
24-01 AV	9/12/2010	207	10	2092	217	4%	10107	1023	F	1000	SI	20	24		5,998	698	61,842
24-01 AV	9/11/2010	206	13	2226	220	6%	10793	1014	F	1000	SI	20	24		5,791	688	59,750
24-01 AV	9/10/2010	200	18	2214	219	8%	11046	1015	F	1000	SI	21	24		5,585	675	57,524
24-01 AV	9/9/2010	207	13	2235	221	6%	10777	1018	F	1000	SI	21	24		5,385	657	55,310
24-01 AV	9/8/2010	215	12	2287	227	5%	10638	1013	F	1000	SI	21	24		5,178	644	53,075
24-01 AV	9/7/2010	204	13	2305	217	6%	11308	1008	F	1000	SI	21	24		4,963	632	50,788
24-01 AV	9/6/2010	217	17	2322	233	7%	10724	1010	F	1000	SI	21	24		4,759	619	48,483
24-01 AV	9/5/2010	217	8	2301	225	4%	10619	1006	F	1000	SI	21	24		4,542	602	46,161
24-01 AV	9/4/2010	221	8	2307	229	4%	10446	1008	F	1000	SI	21	24		4,325	594	43,860
24-01 AV	9/3/2010	220	10	2306	230	4%	10486	1007	F	1000	SI	21	24		4,104	586	41,553
24-01 AV	9/2/2010	211	13	2297	225	6%	10876	1006	F	1000	SI	21	24		3,884	576	39,247
24-01 AV	9/1/2010	212	13	2332	225	6%	10993	1010	F	1000	SI	101	24		3,673	563	36,950
24-01 AV	8/31/2010	219	13	2320	231	5%	10607	1006	F	1000	SI	21	24		3,461	550	34,618
24-01 AV	8/30/2010	220	17	2357	237	7%	10720	1005	F	1000	SI	21	24		3,242	537	32,298
24-01 AV	8/29/2010	204	13	2137	218	6%	10465	1005	F	1000	SI	21	24		3,022	520	29,941
24-01 AV	8/28/2010	195	2	1990	197	1%	10206	1035	F	1000	SI	20	24		2,818	507	27,804
24-01 AV	8/27/2010	204	9	1989	213	4%	9749	1035	F	1000	SI	20	24		2,623	505	25,814
24-01 AV	8/26/2010	140	17	1537	157	11%	10975	1030	F	1000	SI	20	19.5	Down 4.5 hours for wire line.	2,419	496	23,825
24-01 AV	8/25/2010	193	8	1970	202	4%	10196	1015	F	925	SI	18	24		2,279	479	22,288
24-01 AV	8/24/2010	163	14	1679	177	8%	10277	1036	F	925	SI	16	24		2,086	471	20,318
24-01 AV	8/23/2010	168	7	1670	175	4%	9926	1032	F	920	SI	16	24		1,923	457	18,639
24-01 AV	8/22/2010	165	12	1610	177	7%	9780	1040	F	920	SI	16	24		1,755	450	16,969
24-01 AV	8/21/2010	132	20	1333	151	13%	10132	1045	F	900	SI	14	24		1,590	438	15,359
24-01 AV	8/20/2010	138	17	1367	155	11%	9908	1030	F	840	SI	14	24		1,458	418	14,026
24-01 AV	8/19/2010	142	15	1346	157	10%	9509	1035	F	750	SI	14	24		1,320	401	12,659
24-01 AV	8/18/2010	112	13	1161	125	10%	10392	1039	F	800	SI	13	24		1,178	386	11,313
24-01 AV	8/17/2010	124	17	1160	141	12%	9348	1000	F	600	SI	13	24		1,066	373	10,152
24-01 AV	8/16/2010	115	19	1103	134	14%	9561	1000	F	600	SI	13	24		942	356	8,992
24-01 AV	8/15/2010	96	14	840	109	13%	8790	1000	F	300	SI	10.5	24	Blew down csg.	827	337	7,889
24-01 AV	8/14/2010	85	15	878	100	15%	10333	1010	F	660	SI	10.5	24		731	323	7,049
24-01 AV	8/13/2010	85	20	826	105	19%	9726	990	F	650	SI	11	24		646	308	6,171
24-01 AV	8/12/2010	65	10	620	75	14%	9543	1000	F	750	SI	8	24		561	288	5,345
24-01 AV	8/11/2010	60	28	601	88	32%	10013	1000	F	840	SI	8	24		496	278	4,725
24-01 AV	8/10/2010	62	13	614	76	18%	9867	990	F	875	SI	8	24		436	250	4,124
24-01 AV	8/9/2010	68	13	677	82	16%	9911	980	F	900	SI	9	24		374	237	3,510
24-01 AV	8/8/2010	65	17	633	82	20%	9747	950	F	900	SI	9	24		306	224	2,833
24-01 AV	8/7/2010	62	19	669	81	24%	10857	960	F	900	SI	10	24		241	207	2,200
24-01 AV	8/6/2010	65	33	622	98	34%	9568	920	F	850	SI	10	24		179	188	1,531
24-01 AV	8/5/2010	52	88	543	140	63%	10495	870	F	850	SI	11	21	SI 3 hours for maintenance on well head	114	155	909
24-01 AV	8/4/2010	62	67	366	129	52%	5917	840	F	850	SI	14	14		62	67	366

## Wolverine Federal Arapien Valley 24-1



## Wolverine Federal Arapien Valley 24-1



UNITED STATES  
DEPARTMENT OF THE INTERIOR  
BUREAU OF LAND MANAGEMENT

FORM APPROVED  
OMB No. 1004-0137  
Expires: March 31, 2007

**SUNDRY NOTICES AND REPORTS ON WELLS**

*Do not use this form for proposals to drill or to re-enter an abandoned well. Use Form 3160-3 (APD) for such proposals.*

**SUBMIT IN TRIPLICATE- Other instructions on reverse side.**

1. Type of Well  
☒ Oil Well ☐ Gas Well ☐ Other  
 2. Name of Operator **Wolverine Gas and Oil Company of Utah, LLC**

3a. Address  
**55 Campau NW, Grand Rapids, MI 49503**

3b. Phone No. (include area code)  
**616-458-1150**

4. Location of Well (Footage, Sec., T., R., or Survey Description)  
**2331' FNL, 549' FWL, Sec. 24, T20S, R1E, SLB&M**

5. Lease Serial No.  
**UTU-80907**  
 6. If Indian, Allottee or Tribe Name  
**NA**  
 7. If Unit or CA/Agreement, Name and/or No.  
**Wolverine Unit**  
 8. Well Name and No.  
**Wolverine Federal Arapien Valley 24-1**  
 9. API Well No.  
**43-039-30030**  
 10. Field and Pool, or Exploratory Area  
**Wildcat**  
 11. County or Parish, State  
**Sanpete County, Utah**

**12. CHECK APPROPRIATE BOX(ES) TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA**

TYPE OF SUBMISSION	TYPE OF ACTION			
<input type="checkbox"/> Notice of Intent	<input type="checkbox"/> Acidize	<input type="checkbox"/> Deepen	<input type="checkbox"/> Production (Start/Resume)	<input type="checkbox"/> Water Shut-Off
<input checked="" type="checkbox"/> Subsequent Report	<input type="checkbox"/> Alter Casing	<input type="checkbox"/> Fracture Treat	<input type="checkbox"/> Reclamation	<input type="checkbox"/> Well Integrity
<input type="checkbox"/> Final Abandonment Notice	<input type="checkbox"/> Casing Repair	<input type="checkbox"/> New Construction	<input type="checkbox"/> Recomplete	<input checked="" type="checkbox"/> Other <b>Activity Update</b>
	<input type="checkbox"/> Change Plans	<input type="checkbox"/> Plug and Abandon	<input type="checkbox"/> Temporarily Abandon	
	<input type="checkbox"/> Convert to Injection	<input type="checkbox"/> Plug Back	<input type="checkbox"/> Water Disposal	

13. Describe Proposed or Completed Operation (clearly state all pertinent details, including estimated starting date of any proposed work and approximate duration thereof. If the proposal is to deepen directionally or recompleat horizontally, give subsurface locations and measured and true vertical depths of all pertinent markers and zones. Attach the Bond under which the work will be performed or provide the Bond No. on file with BLM/BIA. Required subsequent reports shall be filed within 30 days following completion of the involved operations. If the operation results in a multiple completion or recompleat in a new interval, a Form 3160-4 shall be filed once testing has been completed. Final Abandonment Notices shall be filed only after all requirements, including reclamation, have been completed, and the operator has determined that the site is ready for final inspection.)

The Wolverine Federal Arapien Valley 24-1 was shut-in for a pressure build up analysis on February 22, 2011 which concluded 202 days of testing while producing 37,781 BO and 438 MMCF of gas. Two pressure bombs were lowered into the well prior to shut-in and will be removed from the well after 450 hours of shut-in time. The well will remain shut-in indefinitely until Wolverine completes its analysis of the testing and build up data and presents it to the Board of Oil, Gas and Mining. At this point the Board will make its determination regarding the associated oil well gas. The tubing and packer will also be pulled in the near future for inspection and to repair a leak in the packer. Attached is the production data covering the duration of the permitted testing period.

**RECEIVED**

MAR 14 2011

**Richfield BLM Field Office**

14. I hereby certify that the foregoing is true and correct  
 Name (Printed/Typed)

**Matthew Rivers**

Title **Production Engineer**

Signature

*[Handwritten Signature]*

Date

**03/10/2011**

**THIS SPACE FOR FEDERAL OR STATE OFFICE USE**

Approved by

Conditions of approval, if any, are attached. Approval of this notice does not warrant or certify that the applicant holds legal or equitable title to those rights in the subject lease which would entitle the applicant to conduct operations thereon.

Title

Date

Office

Title 18 U.S.C. Section 1001 and Title 43 U.S.C. Section 1212, make it a crime for any person knowingly and willfully to make to any department or agency of the United States any false, fictitious or fraudulent statements or representations as to any matter within its jurisdiction.

(Instructions on page 2)

**RECEIVED**

MAR 24 2011

**Accepted For Record Purposes**

DIV. OF OIL, GAS & MINING

*Sundry # 1152A00375*



## GENERAL INSTRUCTIONS

This form is designed for submitting proposals to perform certain well operations, and reports of such operations when completed, as indicated on Federal and Indian lands pursuant to applicable Federal law and regulations. Any necessary special instructions concerning the use of this

form and the number of copies to be submitted, particularly with regard to local area, or regional procedures and practices, either are shown below or will be issued by, or may be obtained from the local Federal office.

## SPECIFIC INSTRUCTIONS

*Item 4* - Locations on Federal or Indian land should be described in accordance with Federal requirements. Consult the local Federal office for specific instructions.

*Item 13* - Proposals to abandon a well and subsequent reports of abandonment should include such special information as is required by the local Federal office. In addition, such proposals and reports should include reasons for the abandonment; data on any former or

present productive zones, or other zones with present significant fluid contents not sealed off by cement or otherwise; depths (top and bottom) and method of placement of cement plugs; mud or other material placed below, between and above plugs; amount, size, method of parting of any casing, liner or tubing pulled and the depth to top of any left in the hole; method of closing top of well and date well site conditioned for final inspection looking to approval of the abandonment.

## NOTICE

The Privacy Act of 1974 and the regulation in 43 CFR 2.48(d) provide that you be furnished the following information in connection with information required by this application.

**AUTHORITY:** 30 U.S.C. 181 et seq., 351 et seq., 25 U.S.C. 396; 43 CFR 3160.

**PRINCIPAL PURPOSE:** The information is used to: (1) Evaluate, when appropriate, approve applications, and report completion of subsequent well operations, on a Federal or Indian lease; and (2) document for administrative use, information for the management, disposal and use of National Resource lands and resources, such as: (a) evaluating the equipment and procedures to be used during a proposed subsequent well operation and reviewing the completed well operations for compliance with the approved plan; (b) requesting and granting approval to perform those actions covered by 43 CFR 3162.3-2, 3162.3-3, and 3162.3-4; (c) reporting the beginning or resumption of production, as required by 43 CFR 3162.4-1(c) and (d) analyzing future applications to drill or modify operations in light of data obtained and methods used.

**ROUTINE USES:** Information from the record and/or the record will be transferred to appropriate Federal, State, local or foreign agencies, when relevant to civil, criminal or regulatory investigations or prosecutions in connection with congressional inquiries or to consumer reporting agencies to facilitate collection of debts owed the Government.

**EFFECT OF NOT PROVIDING THE INFORMATION:** Filing of this notice and report and disclosure of the information is mandatory for those subsequent well operations specified in 43 CFR 3162.3-2, 3162.3-3, 3162.3-4.

The Paperwork Reduction Act of 1995 requires us to inform you that:

This information is being collected to evaluate proposed and/or completed subsequent well operations on Federal or Indian oil and gas leases.

Response to this request is mandatory.

BLM would like you to know that you do not have to respond to this or any other Federal agency-sponsored information collection unless it displays a currently valid OMB control number.

## BURDEN HOURS STATEMENT

Public reporting burden for this form is estimated to average 25 minutes per response, including the time for reviewing instructions, gathering and maintaining data, and completing and reviewing the form. Direct comments regarding the burden estimate or any other aspect of this form to U.S. Department of the Interior, Bureau of Land Management (1004-0137), Bureau Information Collection Clearance Officer, (WO-630), Mail Stop 401 LS, 1849 C St., N.W., Washington D.C. 20240

# Wolverine Federal Arapien Valley 24-1

FieldName	Date	Oil	Water	Gas	Total Fluid	Water-Cut	GOR	TP	TS	CP	CS	Choke	Run Time	Comments	Cum Oil	Cum Water	Cum Gas
24-01 AV	2/28/2011	0	0	0	0	0%	0	1174	SI	1160	SI	0	0	SI for PBU	37,781	5,272	437,859
24-01 AV	2/27/2011	0	0	0	0	0%	0	1172	SI	1160	SI	0	0	SI for PBU	37,781	5,272	437,859
24-01 AV	2/26/2011	0	0	0	0	0%	0	1172	SI	1150	SI	0	0	SI for PBU	37,781	5,272	437,859
24-01 AV	2/25/2011	0	0	0	0	0%	0	1172	SI	1150	SI	0	0	SI for PBU	37,781	5,272	437,859
24-01 AV	2/24/2011	0	0	0	0	0%	0	1172	SI	1150	SI	0	0	SI for PBU	37,781	5,272	437,859
24-01 AV	2/23/2011	0	0	0	0	0%	0	1173	SI	1150	SI	23	0	SI for PBU	37,781	5,272	437,859
24-01 AV	2/22/2011	38.37	6.23	602	45	14%	15689	1028	F	1090	SI	23	5.5	SI for PBU	37,781	5,272	437,859
24-01 AV	2/21/2011	166.57	41.63	1998	208	20%	11995	935	F	1050	SI	23	21		37,743	5,266	437,257
24-01 AV	2/20/2011	187.87	36.64	2288	225	16%	12179	928	F	1050	SI	23	24		37,577	5,224	435,259
24-01 AV	2/19/2011	213.21	29.37	2371	243	12%	11120	930	F	1050	SI	23	24		37,389	5,187	432,971
24-01 AV	2/18/2011	195.76	37.03	2363	233	16%	12071	931	F	1050	SI	23	24		37,175	5,158	430,600
24-01 AV	2/17/2011	201.23	31.64	2363	233	14%	11743	931	F	1050	SI	23	24		36,980	5,121	428,237
24-01 AV	2/16/2011	189.89	43.3	2373	233	19%	12497	932	F	1050	SI	24	24		36,778	5,089	425,874
24-01 AV	2/15/2011	202.84	34.98	2416	238	15%	11911	925	F	1050	SI	24	24		36,589	5,046	423,501
24-01 AV	2/14/2011	203.78	36.69	2419	240	15%	11871	924	F	1050	SI	24	24		36,386	5,011	421,085
24-01 AV	2/13/2011	204.03	39.98	2423	244	16%	11876	925	F	1050	SI	24	24		36,182	4,974	418,666
24-01 AV	2/12/2011	189.09	51.68	2427	241	21%	12835	925	F	1050	SI	24	24		35,978	4,934	416,243
24-01 AV	2/11/2011	205.49	26.69	2427	232	11%	11811	926	F	1050	SI	24	24		35,789	4,883	413,816
24-01 AV	2/10/2011	195.72	43.29	2431	239	18%	12421	927	F	1050	SI	24	24		35,583	4,856	411,389
24-01 AV	2/9/2011	202.81	41.68	2438	244	17%	12021	926	F	1050	SI	24	24		35,388	4,813	408,958
24-01 AV	2/8/2011	197.87	30.44	2460	228	13%	12432	928	F	1050	SI	24	24		35,185	4,771	406,520
24-01 AV	2/7/2011	200.81	59.95	2465	261	23%	12275	925	F	1050	SI	24	24		34,987	4,741	404,060
24-01 AV	2/6/2011	196.53	41.63	2461	238	17%	12522	929	F	1050	SI	24	24		34,786	4,681	401,595
24-01 AV	2/5/2011	206.64	33.31	2476	240	14%	11982	932	F	1050	SI	24	24		34,590	4,639	399,134
24-01 AV	2/4/2011	197.85	46.67	2490	245	19%	12585	932	F	1050	SI	24	24		34,383	4,606	396,658
24-01 AV	2/3/2011	201.53	40.01	2490	242	17%	12355	934	F	1050	SI	24	24		34,185	4,559	394,168
24-01 AV	2/2/2011	204.53	33.4	2499	238	14%	12218	934	F	1050	SI	24	24		33,984	4,519	391,678
24-01 AV	2/1/2011	193.29	49.64	2314	243	20%	11972	936	F	1050	SI	23	24		33,779	4,486	389,179
24-01 AV	1/31/2011	214.48	31.61	2448	246	13%	11414	942	F	1050	SI	23	24		33,586	4,436	386,865
24-01 AV	1/30/2011	207.43	35.01	2451	242	14%	11816	939	F	1050	SI	23	24		33,371	4,404	384,417
24-01 AV	1/29/2011	184.9	45.08	2450	230	20%	13250	940	F	1050	SI	23	24		33,164	4,369	381,966
24-01 AV	1/28/2011	188.28	43.57	2452	232	19%	13023	941	F	1050	SI	23	24		32,979	4,324	379,516
24-01 AV	1/27/2011	218.76	25.01	2451	244	10%	11204	942	F	1050	SI	23	24		32,791	4,281	377,064
24-01 AV	1/26/2011	202.83	31.67	2452	235	14%	12089	940	F	1050	SI	23	24		32,572	4,256	374,613
24-01 AV	1/25/2011	187.84	46.71	2456	235	20%	13075	944	F	1050	SI	23	24		32,369	4,224	372,161
24-01 AV	1/24/2011	215.37	21.29	2460	237	9%	11422	946	F	1050	SI	23	24		32,181	4,177	369,705
24-01 AV	1/23/2011	197.43	34.99	2400	232	15%	12156	944	F	1020	SI	23	24		31,966	4,156	367,245
24-01 AV	1/22/2011	203.2	35.01	2417	238	15%	11895	929	F	1020	SI	23	24		31,768	4,121	364,845
24-01 AV	1/21/2011	209.57	34.01	2424	244	14%	11567	930	F	1020	SI	23	24		31,565	4,086	362,428
24-01 AV	1/20/2011	185.77	35.81	2433	222	16%	13097	931	F	1030	SI	23	24		31,356	4,052	360,004
24-01 AV	1/19/2011	199.44	35.25	2446	235	15%	12264	933	F	1000	SI	23	24		31,170	4,016	357,571
24-01 AV	1/18/2011	215.42	33.3	2455	249	13%	11396	932	F	1000	SI	23	24		30,970	3,981	355,125
24-01 AV	1/17/2011	198.67	34.97	2473	234	15%	12448	891	F	1000	SI	25	24		30,755	3,948	352,670
24-01 AV	1/16/2011	200.29	35.01	2423	235	15%	12097	826	F	1000	SI	25	24		30,556	3,913	350,197
24-01 AV	1/15/2011	199.96	30	2435	230	13%	12177	827	F	1000	SI	25	24		30,356	3,878	347,774
24-01 AV	1/14/2011	207.84	35.02	2443	243	14%	11754	824	F	1000	SI	25	24		30,156	3,848	345,339
24-01 AV	1/13/2011	186.53	36.75	2448	223	16%	13124	828	F	1000	SI	25	24		29,948	3,813	342,896
24-01 AV	1/12/2011	206.62	29.97	2447	237	13%	11843	829	F	1000	SI	25	24		29,762	3,776	340,448
24-01 AV	1/11/2011	190.34	39.97	2425	230	17%	12740	835	F	1000	SI	24	24		29,555	3,746	338,001
24-01 AV	1/10/2011	199.87	33.32	2428	233	14%	12148	834	F	1000	SI	24	24		29,365	3,706	335,576
24-01 AV	1/9/2011	201.62	26.67	2441	228	12%	12107	839	F	1000	SI	24	24		29,165	3,673	333,148

24-01 AV	1/8/2011	200.73	31.68	2424	232	14%	12076	844	F	1000	SI	24	24		28,963	3,646	330,707
24-01 AV	1/7/2011	201.16	35.04	2436	236	15%	12110	848	F	1000	SI	24	24		28,763	3,614	328,283
24-01 AV	1/6/2011	195.85	30.96	2442	227	14%	12469	851	F	1000	SI	24	24		28,561	3,579	325,847
24-01 AV	1/5/2011	190.27	41.26	2351	232	18%	12356	865	F	1000	SI	24	24		28,366	3,548	323,405
24-01 AV	1/4/2011	186.21	33.31	2170	220	15%	11654	890	F	1000	SI	23	24		28,175	3,507	321,054
24-01 AV	1/3/2011	148.23	25.01	1701	173	14%	11475	975	F	1000	SI	19	24		27,989	3,474	318,884
24-01 AV	1/2/2011	150.42	18.33	1640	169	11%	10903	971	F	1000	SI	19	24		27,841	3,449	317,183
24-01 AV	1/1/2011	144.97	35.01	1879	180	19%	12961	940	F	950	SI	21	22	Down due to mechanical problems	27,690	3,430	315,543
24-01 AV	12/31/2010	186.55	21.71	2294	208	10%	12297	929	F	975	SI	24	24		27,545	3,395	313,664
24-01 AV	12/30/2010	194.17	30.38	2348	225	14%	12093	861	F	980	SI	24	24		27,359	3,374	311,370
24-01 AV	12/29/2010	170.3	50.73	2353	221	23%	13817	860	F	980	SI	24	24		27,165	3,343	309,022
24-01 AV	12/28/2010	180.45	43.29	2367	224	19%	13117	862	F	980	SI	24	24		26,994	3,293	306,669
24-01 AV	12/27/2010	223.2	16.7	2297	240	7%	10291	863	F	1000	SI	24	24		26,814	3,249	304,302
24-01 AV	12/26/2010	176.68	13.33	1888	190	7%	10686	913	F	1000	SI	22	22	Mechanical problems	26,591	3,233	302,005
24-01 AV	12/25/2010	151.7	13.3	2019	165	8%	13309	922	F	1000	SI	24	18	Mechanical problems	26,414	3,219	300,117
24-01 AV	12/24/2010	207.78	41.63	2401	249	17%	11555	848	F	1000	SI	24	24		26,262	3,206	298,098
24-01 AV	12/23/2010	139.1	83.35	2404	222	37%	17283	850	F	1000	SI	24	24		26,055	3,164	295,697
24-01 AV	12/22/2010	212.02	18.35	2402	230	8%	11329	850	F	1000	SI	24	24		25,916	3,081	293,293
24-01 AV	12/21/2010	221.54	20.07	2407	242	8%	10865	852	F	1000	SI	24	24		25,703	3,063	290,891
24-01 AV	12/20/2010	194.95	18.59	2409	214	9%	12357	852	F	1000	SI	24	24		25,482	3,043	288,484
24-01 AV	12/19/2010	222	8	2418	230	4%	10891	853	F	1000	SI	24	24		25,287	3,024	286,075
24-01 AV	12/18/2010	201	32	2419	233	14%	12026	854	F	1000	SI	24	24		25,065	3,016	283,657
24-01 AV	12/17/2010	189	35	2426	224	16%	12831	856	F	1000	SI	24	24		24,864	2,984	281,238
24-01 AV	12/15/2010	193	32	2384	225	14%	12340	867	F	1000	SI	24	24		24,675	2,949	278,812
24-01 AV	12/14/2010	205	27	2385	232	11%	11613	870	F	1000	SI	24	24		24,482	2,917	276,428
24-01 AV	12/13/2010	195	27	2394	222	12%	12277	871	F	1000	SI	24	24		24,277	2,890	274,043
24-01 AV	12/12/2010	198	37	2403	234	16%	12150	872	F	1010	SI	24	24		24,082	2,863	271,649
24-01 AV	12/11/2010	217	22	2406	239	9%	11086	873	F	1010	SI	24	24		23,884	2,826	269,246
24-01 AV	12/10/2010	193	27	2415	220	12%	12492	876	F	1010	SI	24	24		23,667	2,804	266,840
24-01 AV	12/9/2010	178	45	2418	223	20%	13600	876	F	1010	SI	24	24		23,474	2,777	264,425
24-01 AV	12/8/2010	202	20	2422	222	9%	11984	878	F	1010	SI	24	24		23,296	2,732	262,007
24-01 AV	12/7/2010	213	23	2420	237	10%	11347	879	F	1010	SI	24	24		23,094	2,712	259,585
24-01 AV	12/6/2010	197	41	2419	237	17%	12307	883	F	1010	SI	24	24		22,881	2,689	257,165
24-01 AV	12/5/2010	193	22	2342	215	10%	12118	892	F	1010	SI	23	24		22,684	2,648	254,746
24-01 AV	12/4/2010	191	40	2447	231	17%	12795	880	F	1010	SI	24	24		22,491	2,626	252,404
24-01 AV	12/3/2010	192	38	2450	230	17%	12792	882	F	1010	SI	24	24		22,300	2,586	249,957
24-01 AV	12/2/2010	197	27	2219	224	12%	11237	885	F	1000	SI	24	23	Down for scada test	22,108	2,548	247,507
24-01 AV	12/1/2010	216	25	2425	241	10%	11217	878	F	1025	SI	24	24		21,911	2,521	245,288
24-01 AV	11/30/2010	195	23	2439	218	11%	12512	882	F	1025	SI	24	24		21,695	2,496	242,863
24-01 AV	11/29/2010	203	33	2442	237	14%	12017	882	F	1025	SI	24	24		21,500	2,473	240,424
24-01 AV	11/28/2010	213	25	2440	238	11%	11463	883	F	1025	SI	24	24		21,297	2,440	237,982
24-01 AV	11/27/2010	189	32	2425	220	14%	12844	887	F	1025	SI	24	24		21,084	2,415	235,542
24-01 AV	11/26/2010	203	28	2399	232	12%	11806	890	F	1025	SI	24	24		20,895	2,383	233,117
24-01 AV	11/25/2010	194	25	2360	219	11%	12152	916	F	1025	SI	24	24		20,692	2,355	230,718
24-01 AV	11/24/2010	200	20	2423	220	9%	12116	928	F	1025	SI	24	24		20,498	2,330	228,358
24-01 AV	11/23/2010	188	33	2451	222	15%	13014	895	F	1025	SI	24	24		20,298	2,310	225,935
24-01 AV	11/22/2010	214	26	2469	240	11%	11536	889	F	1025	SI	24	24		20,110	2,277	223,484
24-01 AV	11/21/2010	195	23	2466	218	11%	12644	890	F	1025	SI	24	24		19,896	2,251	221,015
24-01 AV	11/20/2010	203	23	2430	226	10%	11972	896	F	1025	SI	24	24		19,701	2,228	218,549
24-01 AV	11/19/2010	205	27	2378	232	12%	11607	908	F	1025	SI	23	24		19,498	2,205	216,119
24-01 AV	11/18/2010	204	28	2395	232	12%	11755	906	F	1025	SI	23	24		19,293	2,178	213,741
24-01 AV	11/17/2010	178	23	2415	201	11%	13546	907	F	1025	SI	23	24		19,089	2,150	211,346
24-01 AV	11/16/2010	227	29	2381	257	11%	10467	916	F	1025	SI	23	24		18,911	2,127	208,931

24-01 AV	11/15/2010	199	22	2383	221	10%	11959	917	F	1025	SI	23	24		18,684	2,098	206,550
24-01 AV	11/14/2010	202	27	2389	228	12%	11854	922	F	1025	SI	23	24		18,485	2,076	204,167
24-01 AV	11/13/2010	209	22	2395	231	9%	11448	922	F	1025	SI	23	24		18,283	2,049	201,778
24-01 AV	11/12/2010	183	28	2397	212	13%	13071	922	F	1025	SI	23	24		18,074	2,027	199,383
24-01 AV	11/11/2010	193	32	2404	225	14%	12442	923	F	1025	SI	23	24		17,891	1,999	196,986
24-01 AV	11/10/2010	215	25	2408	240	10%	11179	926	F	1025	SI	23	24		17,698	1,967	194,582
24-01 AV	11/9/2010	170	29	2364	199	14%	13870	928	F	1025	SI	23	23	Down 1 hr for maint.	17,483	1,942	192,174
24-01 AV	11/8/2010	186	30	2424	216	14%	13019	926	F	1025	SI	23	24		17,313	1,913	189,810
24-01 AV	11/7/2010	205	27	2430	232	12%	11879	930	F	1025	SI	23	24		17,127	1,883	187,386
24-01 AV	11/6/2010	215	20	2432	235	8%	11295	931	F	1025	SI	23	24		16,922	1,856	184,956
24-01 AV	11/5/2010	206	27	2455	233	11%	11905	929	F	1025	SI	23	24		16,707	1,836	182,524
24-01 AV	11/4/2010	210	22	2435	231	9%	11618	935	F	1025	SI	23	24		16,501	1,809	180,069
24-01 AV	11/3/2010	206	37	2477	243	15%	12010	931	F	1025	SI	23	24		16,291	1,787	177,634
24-01 AV	11/2/2010	214	20	2488	234	9%	11631	932	F	1025	SI	23	24		16,085	1,750	175,157
24-01 AV	11/1/2010	227	23	2475	250	9%	10918	932	F	1025	SI	23	24		15,871	1,730	172,669
24-01 AV	10/31/2010	168	32	2188	200	16%	12998	951	F	1025	SI	22	21	SI due to tank room	15,644	1,707	170,194
24-01 AV	10/30/2010	171	23	2219	194	12%	12996	938	F	1025	SI	23	20		15,476	1,675	168,006
24-01 AV	10/29/2010	207	25	2497	232	11%	12060	938	F	1025	SI	23	24		15,305	1,652	165,787
24-01 AV	10/28/2010	215	25	2508	240	10%	11669	938	F	1025	SI	23	24		15,098	1,627	163,290
24-01 AV	10/27/2010	223	37	2545	259	14%	11420	932	F	1025	SI	23	24		14,883	1,602	160,782
24-01 AV	10/26/2010	189	17	2343	206	8%	12383	946	F	1025	SI	23	23	SI for maintenance	14,660	1,565	158,237
24-01 AV	10/25/2010	202	17	2261	218	8%	11216	976	F	1025	SI	21	24		14,471	1,548	155,894
24-01 AV	10/24/2010	193	17	2290	209	8%	11894	973	F	1025	SI	21	24		14,269	1,531	153,633
24-01 AV	10/23/2010	194	20	2277	214	9%	11725	977	F	1025	SI	21	24		14,076	1,514	151,343
24-01 AV	10/22/2010	179	19	2177	198	9%	12131	875	F	1025	SI	21	24		13,882	1,494	149,066
24-01 AV	10/21/2010	195	27	2198	221	12%	11293	979	F	1025	SI	21	23		13,703	1,475	146,889
24-01 AV	10/20/2010	190	23	2216	212	11%	11692	984	F	1025	SI	21	24		13,508	1,448	144,691
24-01 AV	10/19/2010	193	18	2222	212	9%	11500	986	F	1025	SI	21	24		13,318	1,425	142,475
24-01 AV	10/18/2010	176	33	2225	210	16%	12621	986	F	1025	SI	21	24		13,125	1,407	140,253
24-01 AV	10/17/2010	198	18	2233	217	8%	11265	988	F	1025	SI	21	24		12,949	1,374	138,028
24-01 AV	10/16/2010	196	17	2239	213	8%	11407	987	F	1025	SI	21	24		12,751	1,356	135,795
24-01 AV	10/15/2010	172	28	2253	200	14%	13122	998	F	1025	SI	21	24		12,555	1,339	133,556
24-01 AV	10/14/2010	193	40	2187	233	17%	11320	984	F	1025	SI	21	24		12,383	1,311	131,303
24-01 AV	10/13/2010	187	11	2231	198	6%	11952	1000	F	1025	SI	21	24		12,190	1,271	129,116
24-01 AV	10/12/2010	211	28	2269	240	12%	10731	997	F	1000	SI	21	24		12,003	1,260	126,885
24-01 AV	10/11/2010	203	17	2241	220	8%	11024	988	F	1025	SI	21	24		11,792	1,232	124,616
24-01 AV	10/10/2010	177	28	2209	205	14%	12498	994	F	1025	SI	21	24		11,589	1,215	122,375
24-01 AV	10/9/2010	183	27	2208	210	13%	12052	994	F	1025	SI	21	24		11,412	1,187	120,166
24-01 AV	10/8/2010	194	22	2211	216	10%	11387	995	F	1050	SI	21	24		11,229	1,160	117,958
24-01 AV	10/7/2010	194	18	2218	212	9%	11445	996	F	1050	SI	21	24		11,035	1,138	115,747
24-01 AV	10/6/2010	197	15	2240	212	7%	11371	999	F	1025	SI	21	24		10,841	1,120	113,529
24-01 AV	10/5/2010	199	18	2179	218	8%	10937	997	F	1000	SI	20	24		10,644	1,105	111,289
24-01 AV	10/4/2010	202	12	2241	214	5%	11074	994	F	1025	SI	21	24		10,445	1,087	109,110
24-01 AV	10/3/2010	205	22	2246	227	10%	10957	1000	F	1000	SI	21	24		10,243	1,075	106,869
24-01 AV	10/2/2010	190	25	2258	215	12%	11916	996	F	1000	SI	21	24		10,038	1,053	104,623
24-01 AV	10/1/2010	191	17	2275	209	8%	11904	997	F	1000	SI	21	24		9,848	1,028	102,365
24-01 AV	9/30/2010	208	22	2275	230	9%	10926	996	F	1000	SI	21	24		9,657	1,011	100,090
24-01 AV	9/29/2010	209	15	2279	224	7%	10925	998	F	1000	SI	21	24		9,449	989	97,815
24-01 AV	9/28/2010	205	18	2240	223	8%	10920	998	F	1000	SI	21	24		9,240	974	95,536
24-01 AV	9/27/2010	207	18	2261	225	8%	10925	1000	F	1000	SI	21	24		9,035	956	93,296
24-01 AV	9/26/2010	210	15	2251	225	7%	10742	1004	F	1000	SI	21	24		8,828	938	91,035
24-01 AV	9/25/2010	206	13	2252	219	6%	10917	1004	F	1000	SI	21	24		8,618	923	88,784
24-01 AV	9/24/2010	207	15	2288	222	7%	11057	1006	F	1000	SI	21	24		8,412	910	86,532

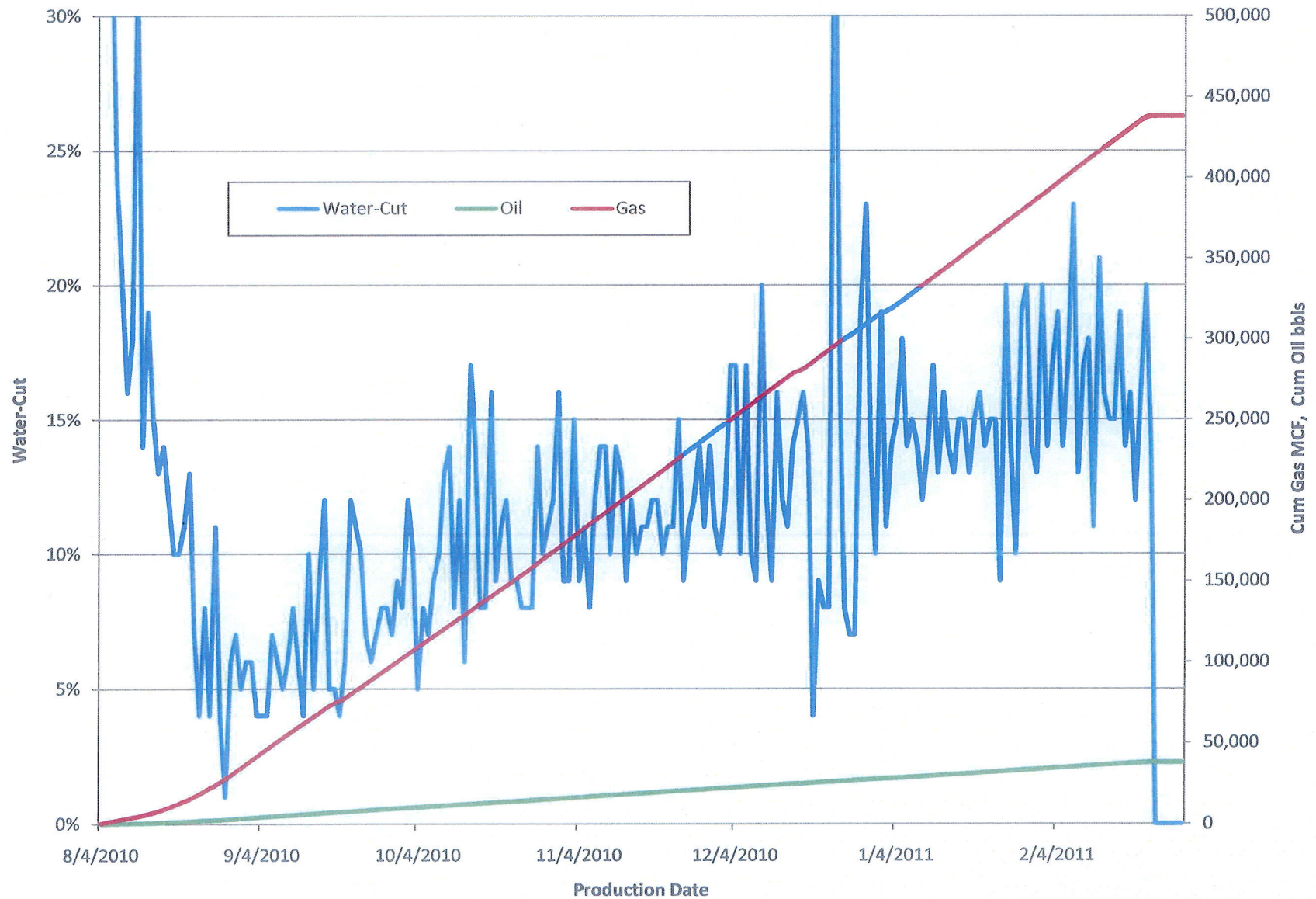
24-01 AV	9/23/2010	203	22	2210	224	10%	10896	1012	F	1000	SI	21	24		8,205	895	84,244
24-01 AV	9/22/2010	210	25	2265	235	11%	10776	1012	F	1000	SI	21	24		8,002	873	82,034
24-01 AV	9/21/2010	178	23	2273	201	12%	12803	1012	F	1000	SI	21	24		7,792	848	79,769
24-01 AV	9/20/2010	172	10	1766	182	6%	10262	1010	F	1000	SI	21	24		7,614	825	77,496
24-01 AV	9/19/2010	179	8	1326	187	4%	7425	1100	F	1000	SI	21	24		7,442	815	75,730
24-01 AV	9/18/2010	208	12	1425	219	5%	6867	208	F	1000	SI	20	23	Down 1 hour due to high vessel pressure	7,263	807	74,404
24-01 AV	9/17/2010	222	12	2334	234	5%	10515	1002	F	1000	SI	21	24		7,055	795	72,979
24-01 AV	9/16/2010	211	29	2377	240	12%	11250	980	F	1000	SI	21	24		6,833	783	70,645
24-01 AV	9/15/2010	207	20	2121	227	9%	10241						0		6,622	754	68,268
24-01 AV	9/14/2010	212	12	2148	223	5%	10150	1019	F	1000	SI	20	24		6,415	734	66,147
24-01 AV	9/13/2010	205	24	2157	229	10%	10499	1022	F	1000	SI	20	24		6,203	722	63,999
24-01 AV	9/12/2010	207	10	2092	217	4%	10107	1023	F	1000	SI	20	24		5,998	698	61,842
24-01 AV	9/11/2010	206	13	2226	220	6%	10793	1014	F	1000	SI	20	24		5,791	688	59,750
24-01 AV	9/10/2010	200	18	2214	219	8%	11046	1015	F	1000	SI	21	24		5,585	675	57,524
24-01 AV	9/9/2010	207	13	2235	221	6%	10777	1018	F	1000	SI	21	24		5,385	657	55,310
24-01 AV	9/8/2010	215	12	2287	227	5%	10638	1013	F	1000	SI	21	24		5,178	644	53,075
24-01 AV	9/7/2010	204	13	2305	217	6%	11308	1008	F	1000	SI	21	24		4,963	632	50,788
24-01 AV	9/6/2010	217	17	2322	233	7%	10724	1010	F	1000	SI	21	24		4,759	619	48,483
24-01 AV	9/5/2010	217	8	2301	225	4%	10619	1006	F	1000	SI	21	24		4,542	602	46,161
24-01 AV	9/4/2010	221	8	2307	229	4%	10446	1008	F	1000	SI	21	24		4,325	594	43,860
24-01 AV	9/3/2010	220	10	2306	230	4%	10486	1007	F	1000	SI	21	24		4,104	586	41,553
24-01 AV	9/2/2010	211	13	2297	225	6%	10876	1006	F	1000	SI	21	24		3,884	576	39,247
24-01 AV	9/1/2010	212	13	2332	225	6%	10993	1010	F	1000	SI	101	24		3,673	563	36,950
24-01 AV	8/31/2010	219	13	2320	231	5%	10607	1006	F	1000	SI	21	24		3,461	550	34,618
24-01 AV	8/30/2010	220	17	2357	237	7%	10720	1005	F	1000	SI	21	24		3,242	537	32,298
24-01 AV	8/29/2010	204	13	2137	218	6%	10465	1005	F	1000	SI	21	24		3,022	520	29,941
24-01 AV	8/28/2010	195	2	1990	197	1%	10206	1035	F	1000	SI	20	24		2,818	507	27,804
24-01 AV	8/27/2010	204	9	1989	213	4%	9749	1035	F	1000	SI	20	24		2,623	505	25,814
24-01 AV	8/26/2010	140	17	1537	157	11%	10975	1030	F	1000	SI	20	19.5	Down 4.5 hours for wire line.	2,419	496	23,825
24-01 AV	8/25/2010	193	8	1970	202	4%	10196	1015	F	925	SI	18	24		2,279	479	22,288
24-01 AV	8/24/2010	163	14	1679	177	8%	10277	1036	F	925	SI	16	24		2,086	471	20,318
24-01 AV	8/23/2010	168	7	1670	175	4%	9926	1032	F	920	SI	16	24		1,923	457	18,639
24-01 AV	8/22/2010	165	12	1610	177	7%	9780	1040	F	920	SI	16	24		1,755	450	16,969
24-01 AV	8/21/2010	132	20	1333	151	13%	10132	1045	F	900	SI	14	24		1,590	438	15,359
24-01 AV	8/20/2010	138	17	1367	155	11%	9908	1030	F	840	SI	14	24		1,458	418	14,026
24-01 AV	8/19/2010	142	15	1346	157	10%	9509	1035	F	750	SI	14	24		1,320	401	12,659
24-01 AV	8/18/2010	112	13	1161	125	10%	10392	1039	F	800	SI	13	24		1,178	386	11,313
24-01 AV	8/17/2010	124	17	1160	141	12%	9348	1000	F	600	SI	13	24		1,066	373	10,152
24-01 AV	8/16/2010	115	19	1103	134	14%	9561	1000	F	600	SI	13	24		942	356	8,992
24-01 AV	8/15/2010	96	14	840	109	13%	8790	1000	F	300	SI	10.5	24	Blew down csg.	827	337	7,889
24-01 AV	8/14/2010	85	15	878	100	15%	10333	1010	F	660	SI	10.5	24		731	323	7,049
24-01 AV	8/13/2010	85	20	826	105	19%	9726	990	F	650	SI	11	24		646	308	6,171
24-01 AV	8/12/2010	65	10	620	75	14%	9543	1000	F	750	SI	8	24		561	288	5,345
24-01 AV	8/11/2010	60	28	601	88	32%	10013	1000	F	840	SI	8	24		496	278	4,725
24-01 AV	8/10/2010	62	13	614	76	18%	9867	990	F	875	SI	8	24		436	250	4,124
24-01 AV	8/9/2010	68	13	677	82	16%	9911	980	F	900	SI	9	24		374	237	3,510
24-01 AV	8/8/2010	65	17	633	82	20%	9747	950	F	900	SI	9	24		306	224	2,833
24-01 AV	8/7/2010	62	19	669	81	24%	10857	960	F	900	SI	10	24		241	207	2,200
24-01 AV	8/6/2010	65	33	622	98	34%	9568	920	F	850	SI	10	24		179	188	1,531
24-01 AV	8/5/2010	52	88	543	140	63%	10495	870	F	850	SI	11	21	SI 3 hours for maintenance on well head	114	155	909
24-01 AV	8/4/2010	62	67	366	129	52%	5917	840	F	850	SI	14	14		62	67	366

## Wolverine Federal Arapien Valley 24-1





# Wolverine Federal Arapien Valley 24-1



UNITED STATES  
DEPARTMENT OF THE INTERIOR  
BUREAU OF LAND MANAGEMENT

FORM APPROVED  
OM B No. 1004-0137  
Expires: March 31, 2007

**SUNDRY NOTICES AND REPORTS ON WELLS**

**Do not use this form for proposals to drill or to re-enter an abandoned well. Use Form 3160-3 (APD) for such proposals.**

**SUBMIT IN TRIPLICATE- Other instructions on reverse side.**

1. Type of Well  
☒ Oil Well ☐ Gas Well ☐ Other

2. Name of Operator **Wolverine Gas and Oil Company of Utah, LLC**

3a. Address  
**55 Campau NW, Grand Rapids, MI 49503**

3b. Phone No. (include area code)  
**616-458-1150**

4. Location of Well (Footage, Sec., T., R., M., or Survey Description)  
**2331' FNL, 549' FWL, Sec. 24, T20S, R1E, SLB&M**

5. Lease Serial No.  
**UTU-80907**

6. If Indian, Allottee or Tribe Name  
**NA**

7. If Unit or CA/Agreement, Name and/or No.  
**Wolverine Unit**

8. Well Name and No.  
**Wolverine Federal Arapien Valley 24-1**

9. API Well No.  
**43-039-30030**

10. Field and Pool, or Exploratory Area  
**Wildcat**

11. County or Parish, State  
**Sanpete County, Utah**

**12. CHECK APPROPRIATE BOX(ES) TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA**

TYPE OF SUBMISSION	TYPE OF ACTION			
<input type="checkbox"/> Notice of Intent	<input type="checkbox"/> Acidize	<input type="checkbox"/> Deepen	<input type="checkbox"/> Production (Start/Resume)	<input type="checkbox"/> Water Shut-Off
<input checked="" type="checkbox"/> Subsequent Report	<input type="checkbox"/> Alter Casing	<input type="checkbox"/> Fracture Treat	<input type="checkbox"/> Reclamation	<input type="checkbox"/> Well Integrity
<input type="checkbox"/> Final Abandonment Notice	<input type="checkbox"/> Casing Repair	<input type="checkbox"/> New Construction	<input type="checkbox"/> Recomplete	<input checked="" type="checkbox"/> Other <b>Install New Packer</b>
	<input type="checkbox"/> Change Plans	<input type="checkbox"/> Plug and Abandon	<input type="checkbox"/> Temporarily Abandon	
	<input type="checkbox"/> Convert to Injection	<input type="checkbox"/> Plug Back	<input type="checkbox"/> Water Disposal	

13. Describe Proposed or Completed Operation (clearly state all pertinent details, including estimated starting date of any proposed work and approximate duration thereof. If the proposal is to deepen directionally or recompleat horizontally, give subsurface locations and measured and true vertical depths of all pertinent markers and zones. Attach the Bond under which the work will be performed or provide the Bond No. on file with BLM/BIA. Required subsequent reports shall be filed within 30 days following completion of the involved operations. If the operation results in a multiple completion or recompleat in a new interval, a Form 3160-4 shall be filed once testing has been completed. Final Abandonment Notices shall be filed only after all requirements, including reclamation, have been completed, and the operator has determined that the site is ready for final inspection.)

**The Wolverine Federal Arapien Valley 24-1 packer assembly was replaced and the work concluded on 9/20/2011. Surface pressure was noted on the backside during shut-in and the packer was consequently pulled for replacement and observation. The seals on the pulled packer had clearly failed due to exposure to CO2. A new packer with CO2 approved seals was run and set above the producing interval at 8751'. The well is currently shut-in until further notice.**

**RECEIVED**

**OCT 07 2011**

**DIV. OF OIL, GAS & MINING**

14. I hereby certify that the foregoing is true and correct  
Name (Printed/Typed)

**Matthew Rivers**

Title **Production Engineer**

Signature



Date

**10/05/2011**

**THIS SPACE FOR FEDERAL OR STATE OFFICE USE**

Approved by

Conditions of approval, if any, are attached. Approval of this notice does not warrant or certify that the applicant holds legal or equitable title to those rights in the subject lease which would entitle the applicant to conduct operations thereon.

Title

Date

Office

Title 18 U.S.C. Section 1001 and Title 43 U.S.C. Section 1212, make it a crime for any person knowingly and willfully to make to any department or agency of the United States any false, fictitious or fraudulent statements or representations as to any matter within its jurisdiction.

(Instructions on page 2)

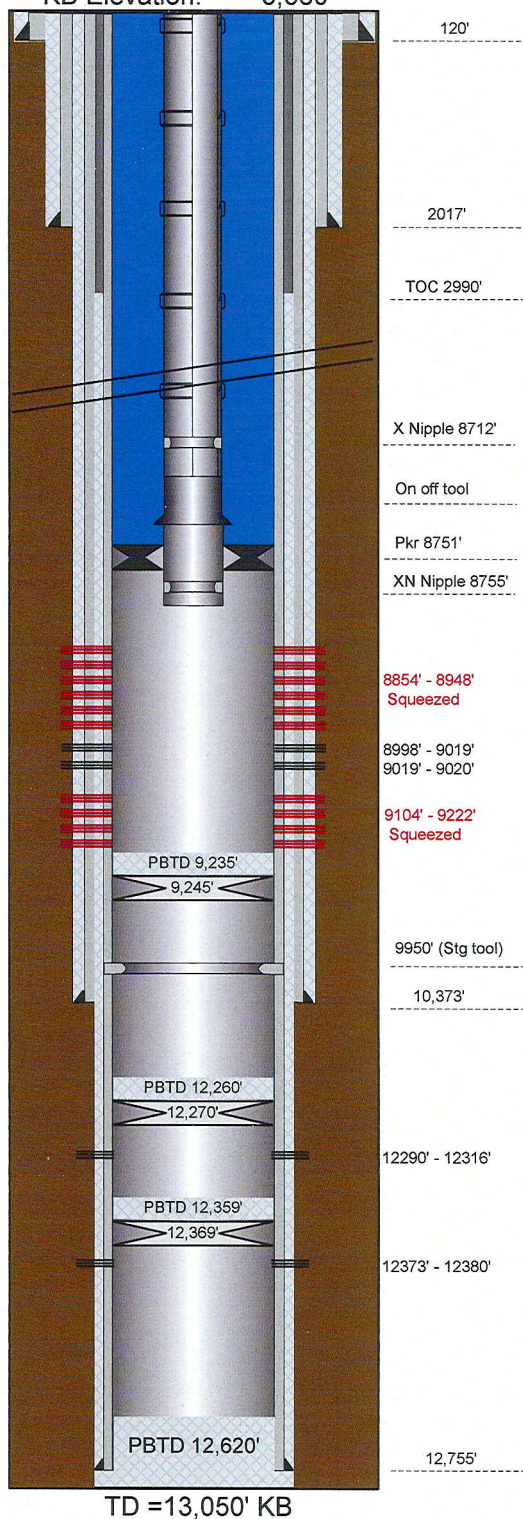
**CONFIDENTIAL**





**Wolverine Federal Arapien Valley 24-1**  
**Providence Field**  
**API # 43-039-30030**  
**Section 24, T20S, R1E**  
**Sanpete County, Utah**

Ground Elevation: 5,554'  
 KB Elevation: 5,580'



**(Not to Scale)**

**Vertical Well**

Surface: 2331' FNL 549' FWL, SW NW, 24-20S-1E  
 Total Depth (Estimated): 2383' FNL 617' FWL, SW NW, 24-20S-1E

**Conductor Casing (10/3/07)**

Size: 24", 0.25" wall in 32' hole  
 Depth Landed: 120' KB  
 Cement Data: Cemented to surface with 8 yds redi-mix

**Surface Casing (11/14/07)**

Size/Wt/Grade: 13 3/8", 68#, J-55, BTC, in 17.5" hole  
 Depth Landed: 2017' KB  
 Cement Data: 405 sks CBM Light (10.5 ppg, 4.14 cf/sk), 410 sks Type III (14.8 ppg, 1.33 cf/sk), Cemented to surface

**Intermediate Casing (1/21/08)**

Size/Wt/Grade: 9-5/8", 4737' of 53# HCP-110 and 5636' of 47# HCL-80, LTC, 8rd in 12.5" hole  
 Depth Landed: 10,373' KB  
 Cement Data: 2620 sks foamed Elastiseal (14.3 ppg, 1.48 cf/sk)  
 630 sks non-foamed Elastiseal (14.3 ppg, 1.48 cf/sk)  
 Note: N2 break-through and foamed cement to surface.

**Production Casing (2/27/08)**

Size/Wt/Grade: 5-1/2", 20#, P-110, LTC, 8rd  
 Properties: 12,640 psi burst, 4.653" drift, 4.778" ID, 0.0221 Bbl/ft Capacity  
 Depth Landed: 12,755' KB,  
 Stage tool @ 9950' KB, Marker Joint @ 12,110' - 12,125.5'  
 Cement Data: Stage 1 - 735 sks 50:50 Poz-Premium (12.5 ppg, 1.85 cf/sk)  
 Stage 2 - 1635 sks Class G (15.5 ppg, 1.20 cf/sk)

**Navajo1 Perforations**

8998' - 9019' MD (8997' - 9018' TVD), 21'	126	holes	
9019' - 9020' MD (9018' - 9020' TVD), 1'	6	holes	
8854' - 8860' MD (8853' - 8859' TVD), 6'	18	holes	(squeezed)
8865' - 8871' MD (8864' - 8870' TVD), 6'	18	holes	(squeezed)
8881' - 8883' MD (8880' - 8882' TVD), 2'	6	holes	(squeezed)
8904' - 8914' MD (8903' - 8913' TVD), 10'	30	holes	(squeezed)
8920' - 8922' MD (8919' - 8921' TVD), 2'	6	holes	(squeezed)
8942' - 8948' MD (8941' - 8947' TVD), 6'	18	holes	(squeezed)
9104' - 9131' MD (9103' - 9130' TVD), 27'	162	holes	(squeezed)
9145' - 9154' MD (9144' - 9153' TVD), 9'	54	holes	(squeezed)
9160' - 9166' MD (9159' - 9165' TVD), 6'	36	holes	(squeezed)
9217' - 9222' MD (9216' - 9221' TVD), 5'	30	holes	(squeezed)

**Navajo2 Perforations**

12,290' - 12,316' MD (12,287' - 12,313' TVD), 26' 156 holes (below CIBP)  
 12,373' - 12,380' MD (12,370' - 12,377' TVD), 7' 42 holes (below CIBP)

**Tubing 9/18/2011**

X-Nipple 8712' KB (2.313" ID)  
 Arrowset 1X 8748' KB  
 XN Nipple 8755' KB (2.313" ID)  
 End of BHA 8759' KB

**PBTD**

(7/11/10) 9,235' - 2 sacks cement on CIBP @ 9,245'  
 (4/29/08) 12,359' - 2 sacks cement on CIBP @ 12,369'  
 (4/12/08) 12,620' - CBL tag



**Wolverine Federal Arapien Valley 24-1**  
**Providence Field**  
**API # 43-039-30030**  
**Section 24, T20S, R1E**  
**Sanpete County, Utah**

**Tubing Detail (9/18/2011)**

	26.00	KB
	-3	Landed above GL
	-3	Compression
266	8622.91	Tubing - 2-7/8", 6.5#, L-80, EUE, 8rd
	4.08	Tubing - 2-7/8", 6.5#, L-80, EUE, 8rd
2	65.25	Tubing - 2-7/8", 6.5#, L-80, EUE, 8rd
1	1.16	X Nipple - 2-7/8", EUE, 8rd, xxxx" ID (xxxx' MD-WLM)
1	32.38	Tubing - 2-7/8", 6.5#, L-80, EUE, 8rd
1	1.41	On/off tool
1	0.78	Seal nipple
1	6.88	Packer - Weatherford, Arrowset 1-X, 5.5" x 2.875, Ni coated (xxxx' MD-WLM)
1	1.25	XN Nipple - 2-7/8", EUE, 8rd, xxxx" ID (xxxx' MD-WLM)
1	2.15	Tubing - 2-7/8", 6.5#, L-80, EUE, 8rd
1	0.44	2 7/8" Re-entry collar

8758.69' KB WLM

Note: Tubing capacity = 0.00579 Bbl/ft, Burst = 10570 psi, Joint Yield = 144960 lbs

MD	TVD	Incl	MD	TVD	Incl
2000	2000	<1	10000	9999	.1
4000	4000	<1	11000	10999	.7
6000	6000	<1	11250	11249	3.0
8000	8000	<1	11500	11498	1.1
8086	Sidetrack tie-in		11750	11748	4.1
8250	8249	6.0	12000	11997	5.9
8500	8499	2.6	12250	12247	.7
8750	8749	.2	12500	12497	.5
9000	8999	1.0			

**Stimulation**

6/23/08 - Perforation breakdowns using ball sealers and 4% KCl were performed on initial Navajo 1 completions.

1/13/09 - Fracture stimulated Navajo 2 (12,290' - 12,316')

7/26/10 - Fracture stimulated Navajo 1 (8998' - 9020')

**Notes**

Surface Location: Latitude = 39.05594222, Longitude = -111.75812931 (NAD 83)

(2/27/08) Design top of Cement behind 5-1/2" casing @ 4000'

(3/27/08): Available Logs: Schlumberger- HRLLA, FMI, CN/LDL, BCS, GR Correlation (in 9-5/8"), ISCE Selman- mud log

## **Wellhead Information**

### **Tubing head flange:**

7-1/16", 10k with flanged connection

### **Tubing hanger:**

Seaboard SM-R-N 7 1/16" x 2 7/8"	Part Number A31815-001
3 - S-Seal	Part Number A16978-002
2 - O-Ring	Part Number 030562-004
2 7/8" AB Mod Seal insert	Part Number 344406-000

### **Tubing head:**

Cameron Type C, 11" API 10k x 7 1/16" with Double "P" Seal bottom  
Casing valve ports – 1 13/16" API 10k

Outside casing valve is to the 13-3/8" x 9-5/8" annulus

Inside casing valve is to the 9-5/8" x 5-1/2" annulus





October 9, 2008

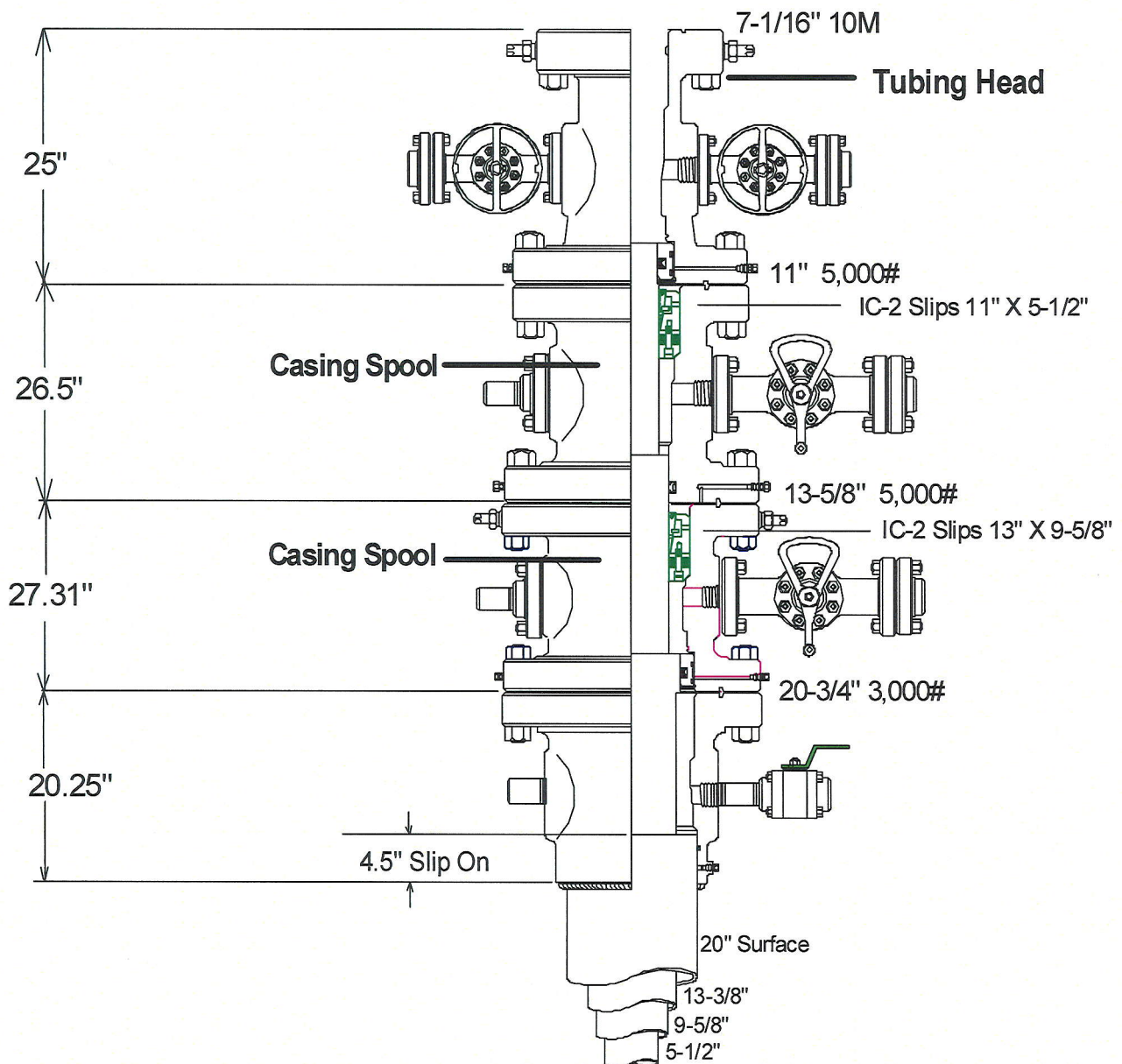
1442 E. Hwy 40  
P.O. Box 429  
Vernal, UT 84078  
P435-781-0434  
F435-789-5656

### Wolverine Gas & Oil

20-3/4" 3,000# X 20" SOW Casing Head  
20-3/4" 3,000# X 13-5/8" 5,000# Casing Spool  
13-5/8" 5,000# X 11" 5,000# Casing Spool  
11" 5,000# X 7-1/16" 10,000# Tubing Head

Casing program

20"  
13-3/8"  
9-5/8"  
5-1/2"



UNITED STATES  
DEPARTMENT OF THE INTERIOR  
BUREAU OF LAND MANAGEMENT

FORM APPROVED  
OM B No. 1004-0137  
Expires: March 31, 2007

**SUNDRY NOTICES AND REPORTS ON WELLS**

*Do not use this form for proposals to drill or to re-enter an abandoned well. Use Form 3160-3 (APD) for such proposals.*

**SUBMIT IN TRIPLICATE- Other instructions on reverse side.**

1. Type of Well <input checked="" type="checkbox"/> Oil Well <input type="checkbox"/> Gas Well <input type="checkbox"/> Other		5. Lease Serial No. <b>UTU-80907</b>
2. Name of Operator <b>Wolverine Gas and Oil Company of Utah, LLC</b>		6. If Indian, Allottee or Tribe Name <b>NA</b>
3a. Address <b>55 Campau NW, Grand Rapids, MI 49503</b>	3b. Phone No. (include area code) <b>616-458-1150</b>	7. If Unit or CA/Agreement, Name and/or No. <b>Wolverine Unit</b>
4. Location of Well (Footage, Sec., T., R., M., or Survey Description) <b>2331' FNL, 549' FWL, Sec. 24, T20S, R1E, SLB&amp;M</b>		8. Well Name and No. <b>Wolverine Federal Arapien Valley 24-1</b>
		9. API Well No. <b>43-039-30030</b>
		10. Field and Pool, or Exploratory Area <b>Wildcat</b>
		11. County or Parish, State <b>Sanpete County, Utah</b>

12. CHECK APPROPRIATE BOX(ES) TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA

TYPE OF SUBMISSION	TYPE OF ACTION			
<input type="checkbox"/> Notice of Intent	<input type="checkbox"/> Acidize	<input type="checkbox"/> Deepen	<input type="checkbox"/> Production (Start/Resume)	<input type="checkbox"/> Water Shut-Off
<input checked="" type="checkbox"/> Subsequent Report	<input type="checkbox"/> Alter Casing	<input type="checkbox"/> Fracture Treat	<input type="checkbox"/> Reclamation	<input type="checkbox"/> Well Integrity
<input type="checkbox"/> Final Abandonment Notice	<input type="checkbox"/> Casing Repair	<input type="checkbox"/> New Construction	<input type="checkbox"/> Recomplete	<input checked="" type="checkbox"/> Other <b>Install New Packer</b>
	<input type="checkbox"/> Change Plans	<input type="checkbox"/> Plug and Abandon	<input type="checkbox"/> Temporarily Abandon	
	<input type="checkbox"/> Convert to Injection	<input type="checkbox"/> Plug Back	<input type="checkbox"/> Water Disposal	

13. Describe Proposed or Completed Operation (clearly state all pertinent details, including estimated starting date of any proposed work and approximate duration thereof. If the proposal is to deepen directionally or recompleat horizontally, give subsurface locations and measured and true vertical depths of all pertinent markers and zones. Attach the Bond under which the work will be performed or provide the Bond No. on file with BLM/BIA. Required subsequent reports shall be filed within 30 days following completion of the involved operations. If the operation results in a multiple completion or recompleat in a new interval, a Form 3160-4 shall be filed once testing has been completed. Final Abandonment Notices shall be filed only after all requirements, including reclamation, have been completed, and the operator has determined that the site is ready for final inspection.)

The Wolverine Federal Arapien Valley 24-1 packer assembly was replaced and the work concluded on 9/20/2011. Surface pressure was noted on the backside during shut-in and the packer was consequently pulled for replacement and observation. The seals on the pulled packer had clearly failed due to exposure to CO2. A new packer with CO2 approved seals was run and set above the producing interval at 8751'. The well is currently shut-in until further notice.

RECEIVED

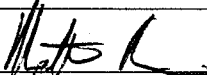
OCT 18 2011

DIV. OF OIL, GAS & MINING

RECEIVED

OCT 7 2011

Richfield BLM Field Office

14. I hereby certify that the foregoing is true and correct Name (Printed/Typed) <b>Matthew Rivers</b>		Title <b>Production Engineer</b>
Signature 		Date <b>10/05/2011</b>

**THIS SPACE FOR FEDERAL OR STATE OFFICE USE**

Approved by _____	Title _____	Date _____
Conditions of approval, if any, are attached. Approval of this notice does not warrant or certify that the applicant holds legal or equitable title to those rights in the subject lease which would entitle the applicant to conduct operations thereon.	Office _____	

Title 18 U.S.C. Section 1001 and Title 43 U.S.C. Section 1212, make it a crime for any person knowingly and willfully to make to any department or agency of the United States any false, fictitious or fraudulent statements or representations as to any matter within its jurisdiction.

(Instructions on page 2)

Summary # 125400055

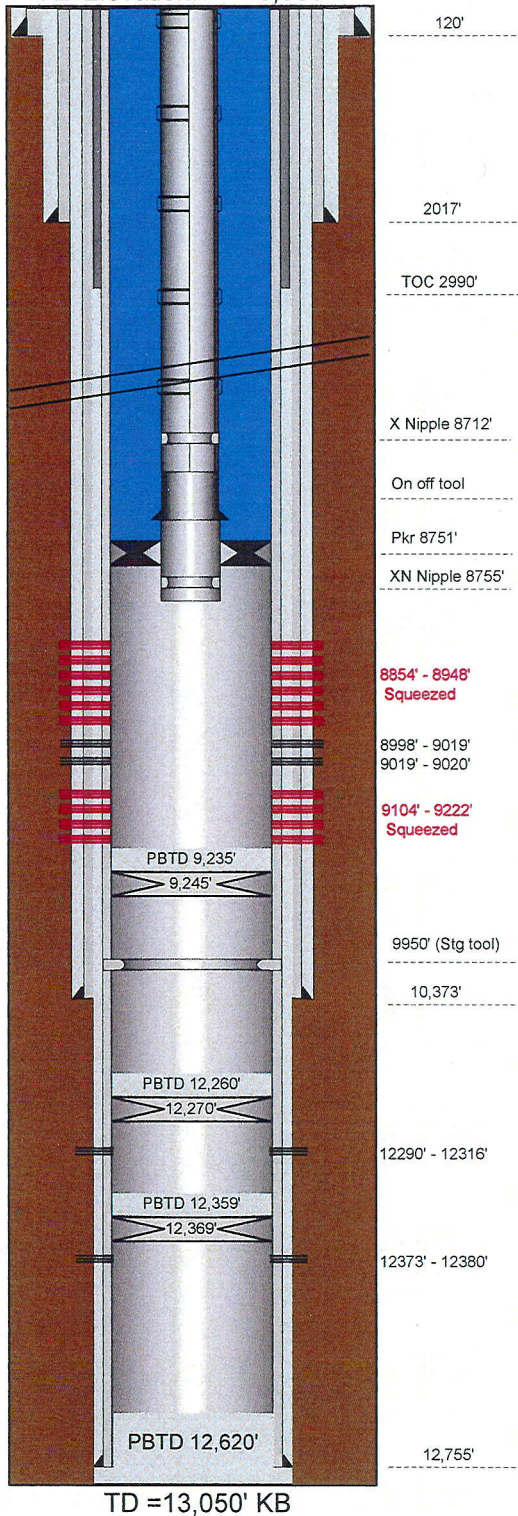
Accepted For Record Purposes

CONFIDENTIAL





Ground Elevation: 5,554'  
KB Elevation: 5,580'



**Wolverine Federal Arapien Valley 24-1**  
**Providence Field**  
**API # 43-039-30030**  
**Section 24, T20S, R1E**  
**Sanpete County, Utah**

**(Not to Scale)**

**Vertical Well**

Surface: 2331' FNL 549' FWL, SW NW, 24-20S-1E

Total Depth (Estimated): 2383' FNL 617' FWL, SW NW, 24-20S-1E

**Conductor Casing (10/3/07)**

Size: 24", 0.25" wall in 32" hole

Depth Landed: 120' KB

Cement Data: Cemented to surface with 8 yds redi-mix

**Surface Casing (11/14/07)**

Size/Wt/Grade: 13 3/8", 68#, J-55, BTC, in 17.5" hole

Depth Landed: 2017' KB

Cement Data: 405 sks CBM Light (10.5 ppg, 4.14 cf/sk), 410 sks Type III (14.8 ppg, 1.33 cf/sk), Cemented to surface

**Intermediate Casing (1/21/08)**

Size/Wt/Grade: 9-5/8", 4737' of 53# HCP-110 and 5636' of 47# HCL-80, LTC, 8rd in 12.5" hole

Depth Landed: 10,373' KB

Cement Data: 2620 sks foamed Elastiseal (14.3 ppg, 1.48 cf/sk)

630 sks non-foamed Elastiseal (14.3 ppg, 1.48 cf/sk)

Note: N2 break-through and foamed cement to surface.

**Production Casing (2/27/08)**

Size/Wt/Grade: 5-1/2", 20#, P-110, LTC, 8rd

Properties: 12,640 psi burst, 4.653" drift, 4.778" ID, 0.0221 Bbl/ft Capacity

Depth Landed: 12,755' KB,

Stage tool @ 9950' KB, Marker Joint @ 12,110' - 12,125.5'

Cement Data: Stage 1 - 735 sks 50:50 Poz-Premium (12.5 ppg, 1.85 cf/sk)

Stage 2 - 1635 sks Class G (15.5 ppg, 1.20 cf/sk)

**Navajo1 Perforations**

8998' - 9019' MD (8997' - 9018' TVD) 21' 126 holes

9019' - 9020' MD (9018' - 9020' TVD) 1' 6 holes

8854' - 8860' MD (8853' - 8859' TVD), 6' 18 holes (squeezed)

8865' - 8871' MD (8864' - 8870' TVD), 6' 18 holes (squeezed)

8881' - 8883' MD (8880' - 8882' TVD), 2' 6 holes (squeezed)

8904' - 8914' MD (8903' - 8913' TVD), 10' 30 holes (squeezed)

8920' - 8922' MD (8919' - 8921' TVD), 2' 6 holes (squeezed)

8942' - 8948' MD (8941' - 8947' TVD), 6' 18 holes (squeezed)

9104' - 9131' MD (9103' - 9130' TVD), 27' 162 holes (squeezed)

9145' - 9154' MD (9144' - 9153' TVD), 9' 54 holes (squeezed)

9160' - 9166' MD (9159' - 9165' TVD), 6' 36 holes (squeezed)

9217' - 9222' MD (9216' - 9221' TVD), 5' 30 holes (squeezed)

**Navajo2 Perforations**

12,290' - 12,316' MD (12,287' - 12,313' TVD), 26' 156 holes (below CIBP)

12,373' - 12,380' MD (12,370' - 12,377' TVD), 7' 42 holes (below CIBP)

**Tubing 9/18/2011**

X-Nipple 8712' KB (2.313" ID)

Arrowset 1X 8748' KB

XN Nipple 8755' KB (2.313" ID)

End of BHA 8759' KB

**PBTD**

(7/11/10) 9,235' - 2 sacks cement on CIBP @ 9,245'

(4/29/08) 12,359' - 2 sacks cement on CIBP @ 12,369'

(4/12/08) 12,620' - CBL tag



**Wolverine Federal Arapien Valley 24-1  
Providence Field  
API # 43-039-30030  
Section 24, T20S, R1E  
Sanpete County, Utah**

**Tubing Detail (9/18/2011)**

	26.00	KB
	-3	Landed above GL
	-3	Compression
266	8622.91	Tubing - 2-7/8", 6.5#, L-80, EUE, 8rd
	4.08	Tubing - 2-7/8", 6.5#, L-80, EUE, 8rd
2	65.25	Tubing - 2-7/8", 6.5#, L-80, EUE, 8rd
1	1.16	X Nipple - 2-7/8", EUE, 8rd, xxxx" ID (xxxx' MD-WLM)
1	32.38	Tubing - 2-7/8", 6.5#, L-80, EUE, 8rd
1	1.41	On/off tool
1	0.78	Seal nipple
1	6.88	Packer - Weatherford, Arrowset 1-X, 5.5" x 2.875, Ni coated (xxxx' MD-WLM)
1	1.25	XN Nipple - 2-7/8", EUE, 8rd, xxxx" ID (xxxx' MD-WLM)
1	2.15	Tubing - 2-7/8", 6.5#, L-80, EUE, 8rd
1	0.44	2 7/8" Re-entry collar
<hr/>		
	8758.69'	KB WLM

Note: Tubing capacity = 0.00579 Bbl/ft, Burst = 10570 psi, Joint Yield = 144960 lbs

MD	TVD	Incl	MD	TVD	Incl
2000	2000	<1	10000	9999	.1
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1/13/09 - Fracture stimulated Navajo 2 (12,290' - 12,316')

7/26/10 - Fracture stimulated Navajo 1 (8998' - 9020')

**Notes**

Surface Location: Latitude = 39.05594222, Longitude = -111.75812931 (NAD 83)

(2/27/08) Design top of Cement behind 5-1/2" casing @ 4000'

(3/27/08): Available Logs: Schlumberger- HRLLA, FMI, CN/LDL, BCS, GR Correlation (in9-5/8"), ISCE Selman- mud log

## **Wellhead Information**

### **Tubing head flange:**

7-1/16", 10k with flanged connection

### **Tubing hanger:**

Seaboard SM-R-N 7 1/16" x 2 7/8"	Part Number A31815-001
3 - S-Seal	Part Number A16978-002
2 - O-Ring	Part Number 030562-004
2 7/8" AB Mod Seal insert	Part Number 344406-000

### **Tubing head:**

Cameron Type C, 11" API 10k x 7 1/16" with Double "P" Seal bottom  
Casing valve ports – 1 13/16" API 10k

Outside casing valve is to the 13-3/8" x 9-5/8" annulus  
Inside casing valve is to the 9-5/8" x 5-1/2" annulus





October 9, 2008

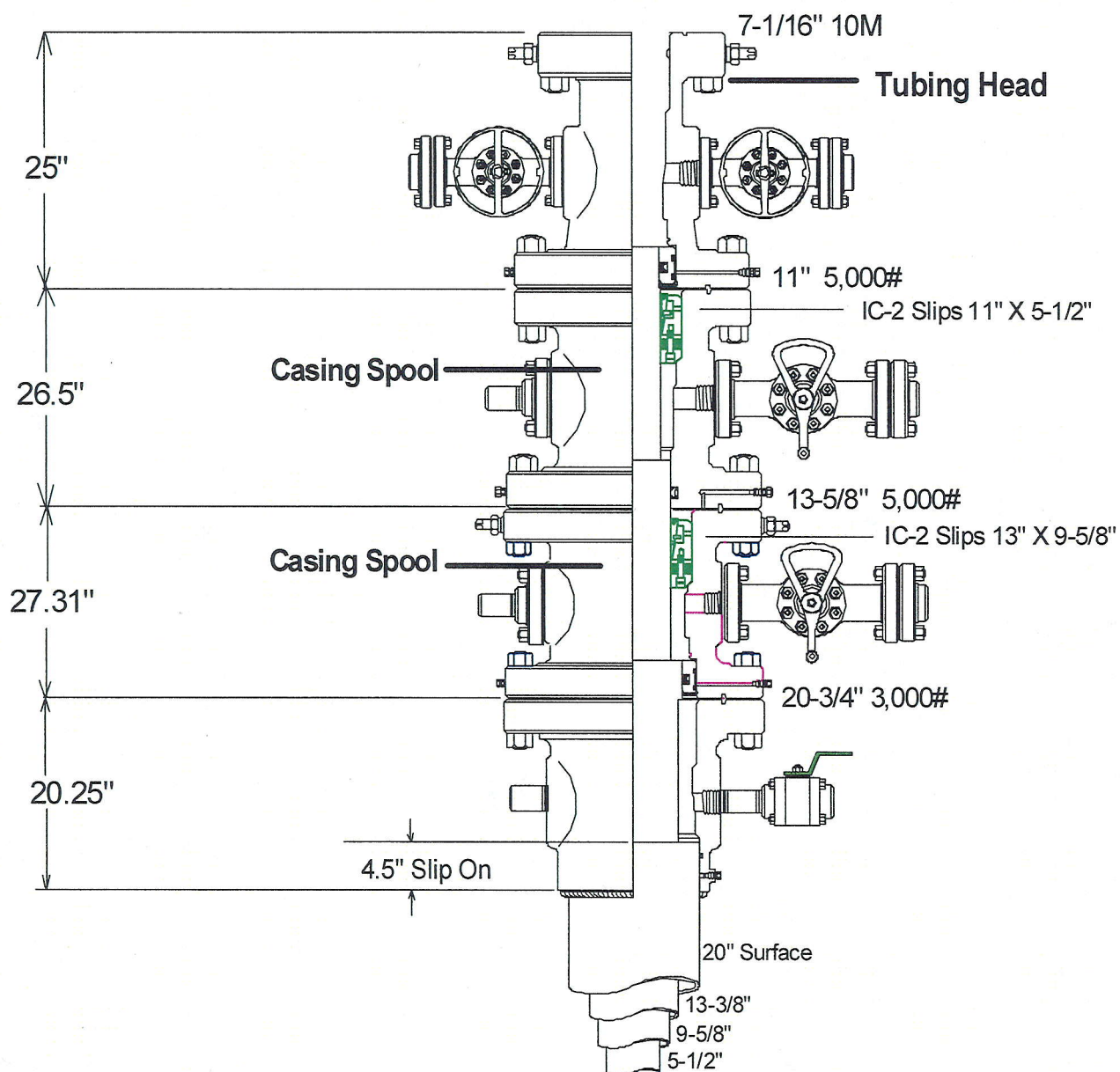
1442 E. Hwy 40  
P.O. Box 429  
Vernal, UT 84078  
P435-781-0434  
F435-789-5656

### Wolverine Gas & Oil

20-3/4" 3,000# X 20" SOW Casing Head  
20-3/4" 3,000# X 13-5/8" 5,000# Casing Spool  
13-5/8" 5,000# X 11" 5,000# Casing Spool  
11" 5,000# X 7-1/16" 10,000# Tubing Head

Casing program

20"  
13-3/8"  
9-5/8"  
5-1/2"



UNITED STATES  
DEPARTMENT OF THE INTERIOR  
BUREAU OF LAND MANAGEMENT

FORM APPROVED  
OMB No. 1004-0137  
Expires: July 31, 2010

**SUNDRY NOTICES AND REPORTS ON WELLS**  
**Do not use this form for proposals to drill or to re-enter an abandoned well. Use Form 3160-3 (APD) for such proposals.**

5. Lease Serial No.  
UTU-80907

6. If Indian, Allottee or Tribe Name  
N/A

**SUBMIT IN TRIPLICATE – Other instructions on page 2.**

1. Type of Well

☒ Oil Well ☐ Gas Well ☐ Other

2. Name of Operator  
Wolverine Gas and Oil Company of Utah, LLC

3a. Address  
5 West Constitution Way, Suite 1140, Richfield, Utah 84701

3b. Phone No. (include area code)  
435-896-1943

4. Location of Well (Footage, Sec., T., R., M., or Survey Description)  
2331' FNL, 549' FWL, Section 24, T20S, R1E, SLM

7. If Unit of CA/Agreement, Name and/or No.  
Wolverine Federal Unit

8. Well Name and No.  
Wolverine Federal Arapien Valley 24-1

9. API Well No.  
43-039-30030

10. Field and Pool or Exploratory Area  
Wildcat

11. Country or Parish, State  
Sanpete, Utah

**12. CHECK THE APPROPRIATE BOX(ES) TO INDICATE NATURE OF NOTICE, REPORT OR OTHER DATA**

TYPE OF SUBMISSION	TYPE OF ACTION			
<input checked="" type="checkbox"/> Notice of Intent	<input type="checkbox"/> Acidize	<input type="checkbox"/> Deepen	<input type="checkbox"/> Production (Start/Resume)	<input type="checkbox"/> Water Shut-Off
<input type="checkbox"/> Subsequent Report	<input type="checkbox"/> Alter Casing	<input type="checkbox"/> Fracture Treat	<input type="checkbox"/> Reclamation	<input type="checkbox"/> Well Integrity
<input type="checkbox"/> Final Abandonment Notice	<input type="checkbox"/> Casing Repair	<input type="checkbox"/> New Construction	<input type="checkbox"/> Recomplete	<input checked="" type="checkbox"/> Other Construct flowline
	<input type="checkbox"/> Change Plans	<input type="checkbox"/> Plug and Abandon	<input type="checkbox"/> Temporarily Abandon	
	<input type="checkbox"/> Convert to Injection	<input type="checkbox"/> Plug Back	<input type="checkbox"/> Water Disposal	

13. Describe Proposed or Completed Operation: Clearly state all pertinent details, including estimated starting date of any proposed work and approximate duration thereof. If the proposal is to deepen directionally or recompleat horizontally, give subsurface locations and measured and true vertical depths of all pertinent markers and zones. Attach the Bond under which the work will be performed or provide the Bond No. on file with BLM/BIA. Required subsequent reports must be filed within 30 days following completion of the involved operations. If the operation results in a multiple completion or recompleat in a new interval, a Form 3160-4 must be filed once testing has been completed. Final Abandonment Notices must be filed only after all requirements, including reclamation, have been completed and the operator has determined that the site is ready for final inspection.)

SEE ATTACHED EXHIBIT FOR PROJECT DESCRIPTION, METHODS OF CONSTRUCTION AND SUMMARY

Federal lease bond WYB000616 (replaces WY 3329)

RECEIVED  
NOV 14 2011  
DIV. OF OIL, GAS & MINING

RECEIVED  
OCT 08 2011  
Richfield BLM Field Office

14. I hereby certify that the foregoing is true and correct. Name (Printed/Typed)

Charlie Irons

Title Senior Landman

Signature

Charlie Irons

Date 10/06/2011

**THIS SPACE FOR FEDERAL OR STATE OFFICE USE**

Approved by

Steve L. Ash

Title

SNRS

Date

Nov. 8, 2011

Conditions of approval, if any, are attached. Approval of this notice does not warrant or certify that the applicant holds legal or equitable title to those rights in the subject lease which would entitle the applicant to conduct operations thereon.

Office

Richfield Field Office

Title 18 U.S.C. Section 1001 and Title 43 U.S.C. Section 1212, make it a crime for any person knowingly and willfully to make to any department or agency of the United States any false, fictitious or fraudulent statements or representations as to any matter within its jurisdiction.

(Instructions on page 2)

Conditions of Approval Attached

Sundry # 12SLA00085

## GENERAL INSTRUCTIONS

This form is designed for submitting proposals to perform certain well operations and reports of such operations when completed as indicated on Federal and Indian lands pursuant to applicable Federal law and regulations. Any necessary special instructions concerning the use of this form and the number of copies to be submitted, particularly with regard to local area or regional procedures and practices, are either shown below, will be issued by or may be obtained from the local Federal office.

## SPECIFIC INSTRUCTIONS

*Item 4* - Locations on Federal or Indian land should be described in accordance with Federal requirements. Consult the local Federal office for specific instructions.

*Item 13* - Proposals to abandon a well and subsequent reports of abandonment should include such special information as is required by the local Federal office. In addition, such proposals and reports should include reasons for the abandonment; data on any former or present productive zones or other zones with present significant fluid contents not sealed off by cement or otherwise; depths (top and bottom) and method of placement of cement plugs; mud or other material placed below, between and above plugs; amount, size, method of parting of any casing, liner or tubing pulled and the depth to the top of any tubing left in the hole; method of closing top of well and date well site conditioned for final inspection looking for approval of the abandonment.

## NOTICES

The Privacy Act of 1974 and the regulation in 43 CFR 2.48(d) provide that you be furnished the following information in connection with information required by this application.

**AUTHORITY:** 30 U.S.C. 181 et seq., 351 et seq., 25 U.S.C. 396; 43 CFR 3160.

**PRINCIPAL PURPOSE:** The information is used to: (1) Evaluate, when appropriate, approve applications, and report completion of subsequent well operations, on a Federal or Indian lease; and (2) document for administrative use, information for the management, disposal and use of National Resource lands and resources, such as: (a) evaluating the equipment and procedures to be used during a proposed subsequent well operation and reviewing the completed well operations for compliance with the approved plan; (b) requesting and granting approval to perform those actions covered by 43 CFR 3162.3-2, 3162.3-3, and 3162.3-4; (c) reporting the beginning or resumption of production, as required by 43 CFR 3162.4-1(c) and (d) analyzing future applications to drill or modify operations in light of data obtained and methods used.

**ROUTINE USES:** Information from the record and/or the record will be transferred to appropriate Federal, State, local or foreign agencies, when relevant to civil, criminal or regulatory investigations or prosecutions in connection with congressional inquiries or to consumer reporting agencies to facilitate collection of debts owed the Government.

**EFFECT OF NOT PROVIDING THE INFORMATION:** Filing of this notice and report and disclosure of the information is mandatory for those subsequent well operations specified in 43 CFR 3162.3-2, 3162.3-3, 3162.3-4.

The Paperwork Reduction Act of 1995 requires us to inform you that:

The BLM collects this information to evaluate proposed and/or completed subsequent well operations on Federal or Indian oil and gas leases.

Response to this request is mandatory.

The BLM would like you to know that you do not have to respond to this or any other Federal agency-sponsored information collection unless it displays a currently valid OMB control number.

**BURDEN HOURS STATEMENT:** Public reporting burden for this form is estimated to average 8 hours per response, including the time for reviewing instructions, gathering and maintaining data, and completing and reviewing the form. Direct comments regarding the burden estimate or any other aspect of this form to U.S. Department of the Interior, Bureau of Land Management (1004-0137), Bureau Information Collection Clearance Officer (WO-630), 1849 C St., N.W., Mail Stop 401 LS, Washington, D.C. 20240

**RECEIVED**

**NOV 14 2011**

**DIV. OF OIL, GAS & MINING**

Exhibit to Sundry Notice dated October 6, 2011  
Providence Field—Installation of New Produced Fluid Flowline

Project Description

Wolverine Gas and Oil Company of Utah, LLC (Wolverine) proposes to install the following facilities on BLM administered land in Sanpete County, Utah, T20S-R1E, Section 24: portion of W2W2, & Section 23: portion of NE4SE4:

- Two 3½ -inch (Fiberspar) lines—for carrying main flow of fluids from well(s).
- One 4-inch PVC line as conduit for a high-voltage electric transmission line—for possible future use in connecting electric power between the Providence Fed 24-4 well pad and the Wolverine Fed Arapien Valley 24-1 well pad.

The primary purpose of the project is to install a flowline to bring produced fluids (oil, gas and water) from the AV 24-1 well (and possibly a future well) to a single production facility to be located on the existing PF 24-4 well pad. At the PF 24-4 pad production equipment will separate oil, gas and water, using a two-stage separation process; i.e., high pressure separation and then a low pressure separation, where the oil and water will be directed to existing storage tanks and where produced gas will be collected, compressed and injected into the PF 24-4 (which will be converted to an injection well) that will accept injected gas continuously and produced water intermittently.

The secondary purpose of the project is to have an extra flowline and a high voltage electric line already in place—in the event future development might require them—avoiding the need to excavate an additional trench at a later time.

The installation would consist of one trench, 4½ feet deep by about two feet wide, commencing at a tie-in on the PF 24-4 pad and running northerly from the edge of pad cross-country a distance of approximately 1150 feet to a point of intersection with the access road to the AV 24-1 well. The trench would then be excavated to a depth of 6½ feet, running a course a few feet east of the road centerline a distance of approximately 980 feet to the edge of the AV 24-1 well pad, from which point it will extend to a tie-in to the operation facilities on the well pad. Total distance of pipeline from edge of PF 24-4 pad to edge of AV 24-1 pad is approximately 2130 feet.

The corridor (disturbed area) is expected to be 20 feet wide; all work will take place within this corridor. An exception to that corridor width is the wash area on the north end of the PF 24-4 well pad, where a corridor of 30 feet will be necessary to make the wash crossing. Another exception to the 20-foot corridor is a staging area, to be 30-feet wide, beginning 50 feet easterly of the lease road/pipeline intersection and running 50 feet northerly of the intersection. This staging area will be necessary in order to pull pipe and conduit around the turn in the trench.

See attached drawing sheets and area map for the location and design of the facilities.

**RECEIVED**

**NOV 14 2011**

DIV. OF OIL, GAS & MINING

## Methods of Construction

A trencher would be used to excavate the portion of the trench that has a twenty-foot corridor. Prior to construction the corridor would be cleared and grubbed of vegetation, where necessary. The spoil from the trench would be stockpiled on both sides of the trench, as results from the normal operation of the trenching machine. Because topsoil would not be removed except for the 2-foot wide trench area, no separate stockpiling of topsoil is planned. The work area would be within the 20-foot corridor. The exception to that process is the wash area on the north end of the PF 24-4 well pad, where a track-hoe will be used to install the pipeline below the bottom of the wash, and to shape and contour the wash back to near its original contour after installation. Flowable fill concrete will be used to bed the lines in the wash area, to secure the facilities and protect them from erosion.

Wolverine's contractors would excavate the trench, deposit a screened native soil or sand bedding, install the electric line conduit on one side and the Fiberspar lines on the opposite side of the trench, cover lines with additional bedding, then fill and compact with native soil in successive layers so as to assure maximum compaction. The entire corridor would be seeded along the length of the cross-country disturbed area, and the roadsides of the lease road, where disturbed.

The construction of the proposed New Produced Flowline Project is estimated to take 10 to 15 days, weather permitting, and is anticipated to commence in December, 2011, or January, 2012. The staging area for equipment involved in the construction would be on the well pads of the AV 24-1 and PF 24-4 wells.

## Summary

All work will take place on BLM land. No other federal, state or local governmental agencies or private authority are involved in permitting this action.

Class I and Class III Cultural Resources Inventories of the corridor were conducted by Bighorn Archaeological Consultants on September 15, 2011. The report has been submitted to the appropriate agencies, including the BLM Richfield Field Office. No cultural sites were identified by the surveys.

A threatened, endangered and sensitive plant species study of the corridor was performed by Rocky Mountain Environmental Research on September 20, 2011. A report was submitted to Larry Greenwood of the BLM Richfield Field Office. No protected plant species were found.

Wolverine hereby submits this Sundry Notice for BLM approval for an on-lease flowline installation on lease #UTU-80907.

Wolverine has a Federal lease bond, WYB000616.

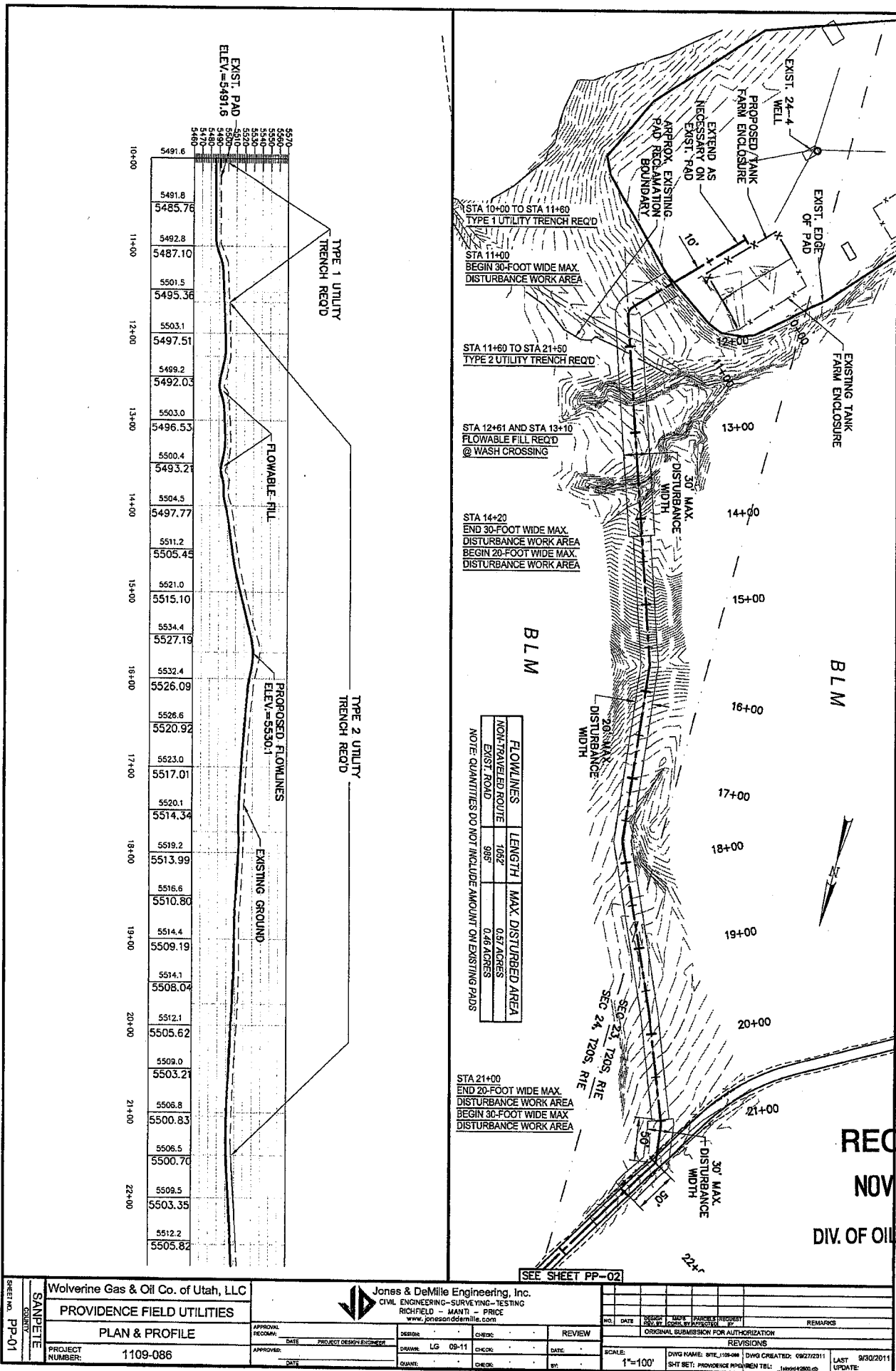
Submitted October 6, 2011, by Charlie Irons.

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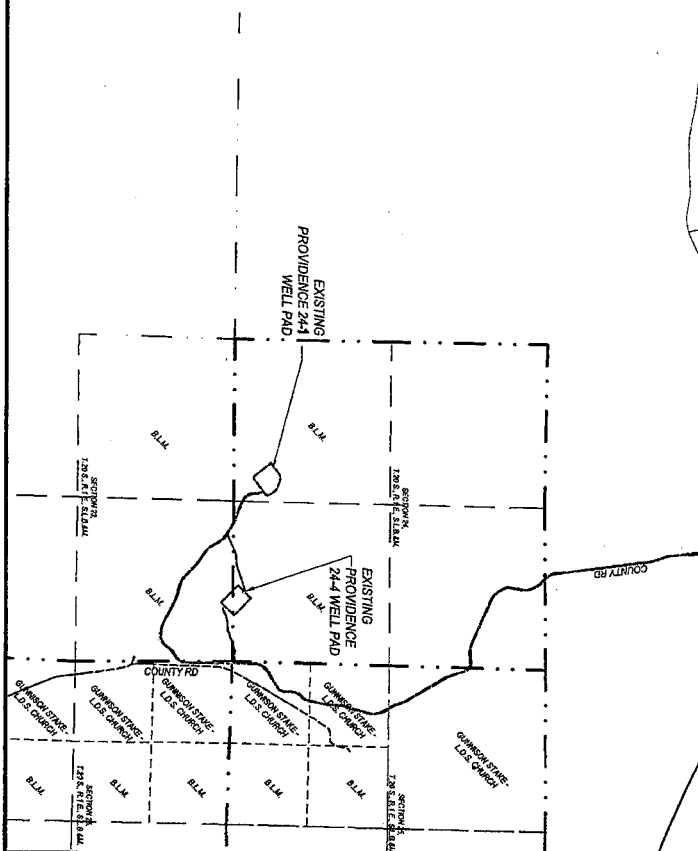





<b>Wolverine Gas &amp; Oil Co. of Utah, LLC</b> <b>PROVIDENCE FIELD UTILITIES</b> <b>PLAN &amp; PROFILE</b> PROJECT NUMBER: 1109-086		<b>Jones &amp; DeMille Engineering, Inc.</b> CIVIL ENGINEERING - SURVEYING - TESTING RICHFIELD - MANTI - PRICE www.jonesanddemille.com		DESIGN: LG 09-11 CHECKED: DATE: _____ QUANTITY: _____		REVIEW: DATE: _____ BY: _____		SCALE: 1"=100' DWG NAME: RTE_1109-086.DWG SHEET SET: PROVIDENCE FIELD UTILITIES DATE: 9/30/2011 LAST UPDATE:	
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DRAWING NO. <b>EX-01</b> SCALE: <b>SANITARY</b>	<b>Wolverine Gas &amp; Oil, Co. of Utah, LLC</b> <b>PROVIDENCE FIELD UTILITIES</b> <b>OVERALL EXHIBIT</b>		 <b>Jones &amp; DeMille Engineering, Inc.</b> CIVIL ENGINEERING - SURVEY - TESTING RICHFIELD - MANTY - PRICE <a href="http://www.jonesanddemille.com">www.jonesanddemille.com</a>		<table border="1"> <tr> <td>NO.</td> <td>DATE</td> <td>DESIGN</td> <td>CHECKED</td> <td>DATE</td> <td>REVISION</td> </tr> <tr> <td> </td> <td> </td> <td> </td> <td> </td> <td> </td> <td> </td> </tr> </table>		NO.	DATE	DESIGN	CHECKED	DATE	REVISION						
	NO.	DATE	DESIGN	CHECKED	DATE	REVISION												
	APPROVAL: _____ DATE: _____		DESIGN: _____ CHECKED: _____ DATE: _____		ORIGINAL SUBMISSION FOR AUTHORIZATION REVISIONS													
PROJECT NUMBER: <b>1109-086</b>		DRAWING: <b>LG 09-11</b> QUANTITY: _____ CHECKED: _____ DATE: _____		SCALE: <b>1"=2000'</b> DWG NAME: EXHIBIT SHT SET: same DWG CREATED: 09/25/2011 PENTBL: 100041202.dwg LAST UPDATE: 9/29/2011														

## Conditions of Approval

1. Any cultural resources be unearthed, surface-disturbing activities will be re-routed to avoid or halted until the cultural sites/artifacts can be evaluated for significance, and a mitigation/salvage plan be formulated. These actions will successfully mitigate possible impacts to cultural resources such that a detailed analysis will not be not required.
2. All dirt/gravel type materials brought in from off site for pipeline construction will come from a pit free of invasive, non-native species.
3. All Federal and State laws will be followed regarding use, storage and disposal of hazardous materials and solid wastes. The areas will be kept clean and free of litter and utilizing appropriate human waste facilities will be used during the operation. Waste and these facilities will be removed from the site and properly disposed of upon completion of the project. Any petroleum spills will be cleaned-up in accordance with State and Federal laws and regulations. Trash will be contained in a portable, self-contained trash cage and hauled to a sanitary landfill.
4. The Applicant has committed to monitoring and treating any noxious weeds along the pipeline. All equipment will be power washed to reduce the potential of introducing new weed species into the area. All disturbed areas will be reseeded the first fall after the disturbance is made to keep weeds from invading the disturbed sites.
5. If any vertebrate fossils are observed during construction all work will cease until consultation with the BLM has been completed.
6. All junk, debris, or other foreign material must be removed before initiating any dirt work to restore the location.
7. Fire suppression equipment will be available to suppress any wildfires caused by construction or related activities. In the event of a wildfire, the Richfield Interagency Fire Center will be notified at (435-896-8404).
8. Any facilities in an existing right-of-way that are damaged as a result of the oil and gas construction, operation, maintenance, or termination shall be repaired or replaced to the same condition as existed prior to the damage. Any costs for such damage or repair shall be the total responsibility of the Applicant.
9. Erosion control and re-vegetation measures shall be implemented to insure that the lands disturbed by construction and maintenance activities will be restored to a stable, productive, and aesthetically acceptable condition.
10. Notice will be provided 48 hours prior to beginning any construction activities.
11. An additional Sundry Notice will be submitted prior to the Providence Federal 24-4 oil well being converted to an injection well. Volumes of gas and oil will be metered prior to being injected downhole.

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12. All of the seed used in reclamation will be mixed together, and will either be broadcast seeded or drill seeded. If the area is broadcast seeded then this will be done by using a four-wheeler equipped with a seeder.

RECOMMENDED SEED MIXTURE

<u>Plant Species</u>	<u>Pounds/Acre</u>
1) Sandberg Bluegrass (High Plains Variety)	0.5
2) Bozoisky Russian Wildrye	2.0
3) Magnar Great Basin Wildrye	1.5
4) Luna Pubescent Wheatgrass	1.0
5) Covar Sheep Fescue	2.0
6) Yellow Beeplant	0.5
7) Gooseberry Leaf Globemallow	0.5
8) Richfield Firecracker Penstemon (P. eatonii)	0.5
9) Cedar Palmer Penstemon (P. palmeri)	0.5
10) Appar Lewis Flax	2.0
11) Common Sunflower	2.0
12) Madrid Yellow Sweetclover	0.5
13) Delar Small Burnet	1.0
14) Wyoming Big Sagebrush	0.5
15) Forage Kochia	1.0

TOTAL 16.0

Topsoil should be collected and piled and used in the rehabilitation process. All of the seed should be mixed together, and either be broadcast seeded or drill seeded. If the area is broadcast seeded then this should be done by using a four-wheeler equipped with a seeder. Seeding rate should be 16 pounds per acre. After broadcast seeding, then the area should be drug with a small harrow (used with four wheeler), which would cover the seed.

If the area is drill seeded then a small tractor equipped with a farm drill should be used. Seeding rate should be 8 pounds per acre.

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**STATE OF UTAH**  
DEPARTMENT OF NATURAL RESOURCES  
DIVISION OF OIL, GAS AND MINING

FORM 6

**ENTITY ACTION FORM**

Operator: Wolverine Gas and Oil Company of Utah, LLC Operator Account Number: N 1655  
Address: 55 Campau NW, One Riverfront Plaza  
city Grand Rapids  
state MI zip 49503-2616 Phone Number: (616) 458-1150

**Well 1**

API Number	Well Name		QQ	Sec	Twp	Rng	County
4303930030	Wolverine Federal Arapien Valley 24-1		SWNW	24	20S	1E	Sanpete
Action Code	Current Entity Number	New Entity Number	Spud Date		Entity Assignment Effective Date		
C	16417	18479	10/3/2007		6/10/2008		
Comments: <u>Approved Providence PA</u> <u>nava</u> <span style="float: right;"><u>4/30/2012</u></span>							

**Well 2**

API Number	Well Name		QQ	Sec	Twp	Rng	County
4303930040	Providence Federal 24-4		SWSW	24	20S	1E	Sanpete
Action Code	Current Entity Number	New Entity Number	Spud Date		Entity Assignment Effective Date		
C	17248	18479	12/1/2008		6/10/2008		
Comments: <u>Approved Providence PA</u> <u>nava</u> <span style="float: right;"><u>4/30/2012</u></span>							

**Well 3**

API Number	Well Name		QQ	Sec	Twp	Rng	County
Action Code	Current Entity Number	New Entity Number	Spud Date		Entity Assignment Effective Date		
Comments:							

**ACTION CODES:**

- A - Establish new entity for new well (single well only)
- B - Add new well to existing entity (group or unit well)
- C - Re-assign well from one existing entity to another existing entity
- D - Re-assign well from one existing entity to a new entity
- E - Other (Explain in 'comments' section)

Jennifer Van Woerkom

Name (Please Print)

Signature

Accountant

Title

4/30/2012

Date

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**APR 30 2012**

Div. of Oil, Gas & Mining